



SEQUENCE LISTING

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<120> A METHOD FOR ISOLATING A POLYNUCLEOTIDE OF INTEREST
FROM THE GENOME OF A MYCOBACTERIUM USING A BAC-BASED
DNA LIBRARY. APPLICATION TO THE DIRECTION OF
MYCOBACTERIA.

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<140> PCT/IB 99/00740

<141> 1999-04-16

<150> US 09/060756

<151> 1998-04-16

<160> 726

<170> PatentIn Ver. 2.1

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<211> 12732

<212> DNA

<213> Mycobacterium tuberculosis

<400> 1

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<210> 2
 <211> 289
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 2						
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accaatgtgc	acgccattgt	cgagcaggca	ccggtgccag	ccccgaatc	cgggtgcacca	180
ggcgacaccc	cggccacacc	cggtatcgac	ggcgcgctgc	tgttcgcgct	gtcggccagc	240
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<210> 3
 <211> 278
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 3						
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ggatctggtg	attttgcg	ctaccgcga	ttaccgcgc	cggctcgacg	agtttttggc	180
ctggactacc	cgcgtggcca	atctgctgaa	ctcgcggccg	gtggtggcct	ggaatgtcca	240
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<210> 4
 <211> 1280
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 4						
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<210> 5
 <211> 127
 <212> DNA
 <213> Mycobacterium tuberculosis

gggcatcggc	ggaatcggcg	gtaacgctaa	cggggcgccc	ggtgggaacg	gcggcaccgg	60
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cgacacc						127

<210> 6
 <211> 434
 <212> DNA
 <213> Mycobacterium tuberculosis

aataactcaag	cttgcccagc	cgtcgatgac	aagaaatatg	tccgcaaaag	actcagcggc	60
cgactttgct	cgcagctggc	ggtaccgcgc	caccgattct	atgccgtggt	cgcggaaaaa	120
tgctctccga	aatcgcacgg	ccgactccag	ttcggcgagc	atccgcgatg	ccagctgcgg	180
ctgcgccttg	cgggccacgg	caccacatg	cggcagttcg	tccacctggg	ccagcgcccc	240
gccgccgaat	tccaaacaat	agaactgcac	cgggcccgca	tcgtgggtaa	cagccaacgc	300
catgatcagc	gtccgcagcg	cggttgactt	gcccgtttgc	ggtgcacct	cgaacgcgac	360
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attgaaattc	cgat					434

<210> 7
 <211> 332
 <212> DNA
 <213> Mycobacterium tuberculosis

ccacccgtgt	aatttgggat	gggcaaaaag	gcgaagcacc	gcgtggccac	gaacgcgggg	60
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cacctcgctg	cgccctccga	ccgcgaacat	tcggggatgg	cagcaacctg	ctggcaccct	180
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aaacgcgatg	accatcgatg	tgtggatgca	gcatccccgac	gcaacggttc	ctacaccgcg	300
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<210> 8
 <211> 354
 <212> DNA

<213> Mycobacterium tuberculosis

<400> 8

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aataactcaag ctttcgcgcg ataccgcgca tgtcgcgcac atccaggact tctgggggga 60
tccgctgaca gcggcgggat cccaaagtgc ggatgatcgg gccgcctacg tcgtggtgta 120
cctcgtcggt aacaacgaaa ccgaagcgta tgactcggtc cacgcggtgc ggcacatggt 180
ggacaccaca ccgccaccgc acgggggtgaa ggcctatgtc accggtccgg cagcactcaa 240
tgccgaccag gccgagggcg gagacaaaag tatcgctaag gtcaccgcga tcaccaacat 300
ggtgatcgca gcaatgttgc tagtgatcta tcgctccgta attaccgcgg ttct 354
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<210> 9

<211> 353

<212> DNA

<213> Mycobacterium tuberculosis

<400> 9

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aacgacgacg tcgtccgcgg gacacacctc gatgctgccg ccatggacgc ggtcgaacgc 120
aagcagctga tcgagctaca acgcgcgcgc gaacgcttcc gccgcgggcg tgaccgcac 180
ccgttgaccg ggcggtatgc ggtgatcgtc gatgacggca tcgccaccgg agcgacggcc 240
aaggcggcgt gccaggtcgc ccggggcgac ggtgcggaca aggtggtgct ggcggtccc 300
atcgggccag acgacatcgt ggcgagattc gccgggtacg ccgatgaggt ggt 353
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<210> 10

<211> 279

<212> DNA

<213> Mycobacterium tuberculosis

<400> 10

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aataactcaag ctttcggcgg aaacggacac attgcgaata ttgatgacaa aataaaaaatc 60
attgatggtt tgagtcacca ggccgatcaa gccttcgccg agccaaattc caatcaagag 120
gcccgaagccc gtaccaatca gcccggaac gagggattcc gtcattatca gccaaaataa 180
ctgctctcgg gttacacca aacagcgcaa tatggcgaaa aacggtcgcc gttgcacgac 240
attaaatgtc acggtattgt agattaaaaa gataccac 279
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<210> 11

<211> 376

<212> DNA

<213> Mycobacterium tuberculosis

<400> 11

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tgagaccgcg ggtcgaacca gccacgtgtc catcatagng ggtcaacccc ggccaagggc 120
gacggcacgc caagttcgcc gaccgttaac ctagtgtctg tagcttcatt tgctgcgatc 180
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ggtgtcctgg ctgcggtgtc gctggtgttg tccgcgtgtg gtaacgacga caatgtgacc 300
gggggaggtg caaccactgg ccaggcgctc gcaaaggctc attgcggggg gaagaagaca 360
ctcaaagcca gtgggt 376
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<210> 12

<211> 393

<212> DNA

<213> Mycobacterium tuberculosis

<400> 12
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 gagcatggcg ccggcgacgg ctagcagcga tccgccgtcg tcgaggagca cgacacgagc 180
 cgtacgcccg gccgtaagcc gcgccagga ttcggcgaaa aaccgttcta cgtggcgggt 240
 gtactgggtg tcgaatgatt cgtgggggtg gtaggcgtcg ctgcaatcgt cgacatagat 300
 gccgtcgggc cgcacgcgt cgacaactcc gggtgagtgg aatagcactt gccgatcacc 360
 gcgacgttgc gcgcatgagg ccgaaccga ata 393

<210> 13
 <211> 272
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 13
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 gtatcgccgg acgaaatctg cgacgcatac gggggcatat acgcttcggg ttacgagat 180
 gtcgatgggg ccgctggagg cttcacgtcc atgggccaca aaggatgttg tcggcgcgta 240
 ccgttttctg cagcgggtgt ggcgcttggc cg 272

<210> 14
 <211> 286
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 14
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 accaccggc tgcgctacgt ctaaccattc caggcgagc tacatcagct cggccgcca 180
 gtgttcgggc cctctttcca ggtcgaagtc tataccgata tgcgcatccg cagccgccac 240
 cctggagaac agaacgatgc cctactaatg cttgtctggc ggggcc 286

<210> 15
 <211> 357
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 15
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 gctcggcatt ggtcatcggg atatgccgt cgggacggtc agagccctcg ggtccggcca 180
 gcaactccga ggcttcgtcg gggtggtcgc gacgcgcatg ggccaccatc gcattcacca 240
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 gacccgaatg ctccgggaaa catgtcacgg taggtcggtg ttccggctac cggctga 357

<210> 16
 <211> 83
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 16

ggcgtcaacg gtgtcggaac ccggtcaag caattggtag gcctgcagtc tgtgaatcag 60
gccgacgctg tggccgcccgc ggc 83

<210> 17
<211> 383
<212> DNA
<213> Mycobacterium tuberculosis

<400> 17
ggctngcgta cccggtaccg gccgcggggc taccacgtgc cggaactgga agcgcagtaa 60
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tggggcggcg cactgcgacc tcaccagcgg ctttcgagct ttgttcgacg aaccggccag 180
catggtcgan gatgcattcg agaccatatt cgaaattggt ttcacgcggg gccccgatcc 240
gatgccccct cccagttgcg tgagcaanca gcggagtcnt cgcgggacgc atggccacgg 300
ggtgttcaat ggcggatggt ccgctgcccg ccgactggct cttgcgggag aaccgatcta 360
gcaccaccga tccgcgcacg tng 383

<210> 18
<211> 603
<212> DNA
<213> Mycobacterium tuberculosis

<400> 18
cgtaantnctg cgcacanca ngacttctgg ggggatcngc tgacagtggg nggatcccaa 60
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tctatcgctc cgtaattacc gcggttctcg tcttgatcat ggtcgcancg aactccggcg 360
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tta 603

<210> 19
<211> 190
<212> DNA
<213> Mycobacterium tuberculosis

<400> 19
tgaatttccc gatcccacaa tctcggttca gatacaggtc gccatacccc ttacttcggc 60
aacgctgggc ggattggccc tgcngetgca gcanaccatc gacgccatcg aattgcccgc 120
aatctcgttc agccaatcca taccatcgca cattccgcgc atcgacatcc cggccttcnc 180
cctttaacgg 190

<210> 20
<211> 506
<212> DNA
<213> Mycobacterium tuberculosis

<400> 20
aacagctatg accatgnnta cgccaagcta tttaggtaac actatanaat actcaagctt 60

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gcgacagccg	cctgaccctg	aaaccagctt	ccatatcccg	cgacnaacna	cncagtcgg	240
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gccgttcacc	gaccaagccg	ccgaacaagt	ccgcccgatc	gcatactcca	accggttgcg	420
gtactgcagg	tcagctggcg	tacctcctcn	tcncgctcgg	cgaagtcttg	ctccancacg	480
tcgcagaacg	gcaaggaaca	cgttca				506

<210> 21

<211> 388

<212> DNA

<213> Mycobacterium tuberculosis

<400> 21

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tgagtcggcg	accgncgatc	atggtcgaca	cccacgacng	aaatacgag	atcgccntcn	180
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cgtggcagct	cgaaagggtc	ctgccgggtgc	cggtctttgc	gcaaaccatg	cncatgttac	360
ggtccctcgg	gtgcggcctg	gcggcggc				388

<210> 22

<211> 138

<212> DNA

<213> Mycobacterium tuberculosis

<400> 22

gggatggggc	ggcccgtata	actcttcgtg	ttccactaac	tccgggaggg	ncaatctcgg	60
gccgttatgg	ctcacgtcgc	gtcgccctcc	gaccgcgaac	attcgagatt	ggcagcaacc	120
tggtagcacc	ctggccgg					138

<210> 23

<211> 142

<212> DNA

<213> Mycobacterium tuberculosis

<400> 23

nccgtcggtt	acaagtaaat	atgtccgcaa	aagtctcagc	ggccgacttt	gctcgcaggt	60
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cggccttccc	nntttaaacg	ga				142

<210> 24

<211> 441

<212> DNA

<213> Mycobacterium tuberculosis

<400> 24

tttaggtgac	actatagaat	actcaagctt	ttggtctagc	cggccgagca	cgatacgggt	60
gtcattggcc	accggcgggc	gctgtccggg	aaatggcggg	tccccggtgg	ttttgctgat	120
gagtgtgtaa	ccgtantcga	agtggggcgc	gtcagactcc	acccanccag	caggcagcgc	180
gaagctgaat	cctccaaccg	ggttgtcnat	ccggacaagt	tgggggtcgt	ttggggcaat	240

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gtggcgctca	acggtcnacg	gcgcaagccg	ccgttggttg	taccnggggc	gctgggtccg	420
gatcgcggtg	gcggtcnccg	g				441

<210> 25
 <211> 453
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 25						
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ggaacaaatt	gacgcagcgg	ttccgctgac	caatacggtc	ggtcccacga	tgaccagta	180
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cngcgacccg	gcctatgggt	attcnacctc	nccgcccaat	gttgcgactc	cgttcggggt	360
gttcccanaa	gtcnccccgg	tcgtcatcgc	cgaanctctc	ntcccgggac	ccacagggaa	420
tcngcnattt	cncctacaaa	tcancacact	cca			453

<210> 26
 <211> 228
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 26						
gcatgatcgg	ccacctttcg	ggcgcgccgg	catacggcgg	cgtaccgatc	tccgcgtcat	60
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aatcgagttc	caggtccagc	gggtggcgca	ccaacggcgc	gagctcaacg	acgtcaatcn	180
cgttgctcgt	ttctacggtc	accgacctgt	gtgaccgtag	ttcncccg		228

<210> 27
 <211> 357
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 27						
gacactatag	aatactcaag	cttgccaacc	gccagcctgc	atccggcggc	gancactgct	60
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cccgcgagtc	cgcgcaccat	caacgcgcgc	ggcaccacca	nggcggcccc	accctgcacg	180
gcgacgatca	ttccggcgcc	gctcacggcg	ggcggggctc	gaacangcac	agcatcaacg	240
tngtcacccg	gccgtgaccg	gcccgcacgc	tcacaccacc	caagcccatt	gccgtcctcc	300
tcaacngggc	gaccgcggcc	gcatcgctac	acggnctaag	gccattgccg	tcctcct	357

<210> 28
 <211> 384
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 28						
tcggcgccat	cggcaccttc	gaggacctgt	atttcgacgc	cgtggccnac	ctgaggttg	60
cgggtggacna	agtgtgcacc	cggttgattc	gctcggcctt	gccggatgcc	accnngcgcc	120
tggtggctga	tccgcnaana	gacaanttgt	ggtggangct	tctgctgcct	gcgacacca	180

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cnacgtggtg gcaccgggca gotttagctg gcatgtcctg accgcgctgg ccgacnactc 240
cagacnttcc acnaanggtc gccnncccaa tgtnccgan tgtctccggn tccctttacc 300
ncccaatggg cngnttccac nggttacggg ccccntnccg gcgggtctnc ctcccaanct 360
accaaatacg cccgacnttc cgga                                     384

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<210> 29
<211> 266
<212> DNA
<213> Mycobacterium tuberculosis

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<400> 29
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gcttcctttt cggccgcaac atgagccagc ctctcgtcgg cggtcgggtg caggtgctcg 120
ggcagctcgg ccgcgaacag cccggcttga accctgaaaa ccngctttcc atatcccgcg 180
acgaaagaac gccagttccg ctacttaacc cctccgcgaa ccgtccatgg acaacagcgc 240
gttctccacc aaccgggccc ggggtgt                                     266

```

```

<210> 30
<211> 423
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 30
tcggctcagg ccgcgctgct ggtagagtcg ctgaccgggtg caggtttcga caatgtggtg 60
ccggttcggc ggctacgtgc catcgagaca ctggcgagg ctatcgacc cgttatcggc 120
tacgaagcaa atcgcggtat gcgttcttga gcatgagtcg gcgaccgtcg tcatggtcga 180
caccacagac ggaaagacgc agatcgccgt caagcatgtg tgccgcggat tatcaggact 240
gacctcctgg ctgaccggca tgtttggtcg cgatgcctgg cggccggccg gcgtggtcgt 300
ggtcggctcg gatagcgagg tcagcgaatt ctctgtggcag ctcgaaaggg tcctgccggg 360
gccggtcttt gcgcaaacaa tagcgcaggt tacggtcgcg cgggggtgcgg cctggcgggc 420
gcc                                     423

```

```

<210> 31
<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 31
caagctattt aggtgacact atagaatact caagcttcgc gtctacgccg gcccggagca 60
tccgcacagc gctcagcagc cggttccgta cgantcgaag caggtggcgc aatgaccgaa 120
accacccag ccccgcaaac cccggcgggc cggcgccggc ccgcacaatc gttcgtgttg 180
gagcggccca tccanaccgt tgggcgcggt aaggangccg tggtagaat gcggctggtg 240
ccggcaccg gcaagttcga cctcaacggc cgcagcttgg angactactt cccaaacaag 300
gtgcaccagc agttgatcaa ggcacccctg gtcaccgtgg atcgggtgga aagtttcgac 360
atctttgccc acctggggcg cggcgccgt cgggtcaggc cgggcctgcc ctgggtatcg 420
ccgggacatt gattctggtg tcccngaag aaccg                                     455

```

```

<210> 32
<211> 371
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 32

```

```

cggttgggcca ccgctttctgc ggtgcccgcg ccgtcgacaa tgaccgtgtc gtccttgctg 60
accaccacgc gtcggggccga gccagcacc tccaagccca cctcgcgag caccatgccg 120
gcgtcgggggt tgaccacctg gccacccgtc accaccgcca ggtcctcaag gaaacgcctt 180
acggcgggtca ccgaagtacg gcccttgac cgcgaccgtt ttcaacgtct tgcgaatcgc 240
gttgacgacc agcgtcgcca acgcttcgcc ctccacgtct tcagccacga tcagtagtgg 300
cttaccggtt cctgcaacct tttccagcaa tggcaacaga tcgggaagcg anctgatctt 360
gtcttggtgc n 371

```

```

<210> 33
<211> 320
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 33
ccaagctatt taggtgacac tatagaatac tcaagctttt ggctgggtcg ccttcgaatt 60
cngcgtgcac cgctatgggt tgcanacgcg gctggcgccg cacacccac tggcccggtt 120
gttttcgccc cgaaccggga tcatggtgag cgaaaaggan attcncctgt tcgatgctgg 180
gattcgccac gccaaaggcat ctanagatta ctctcncgg ggtgggaaaa gtgcccaatc 240
ccccccctc caactttccn aacaatcatt ccggttcnc cntccggttg gnggtaaccn 300
nccaataaaa cccctgccc 320

```

```

<210> 34
<211> 383
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 34
gcccgencat ggccaatccc cgaagacatc attggccagt ggccggggcg taacagggtt 60
cagcccccca ccantgccgc tcgaacatgc ggtgcaaccc attcgagggc cggcagggaa 120
agcaccgcgg aagccgcaaa gggctgcagt tccgcgcca ataatgtcgt ccgcaaccag 180
atgcgctcna aaacncnc ccgagtcagc gcacccgacg cgaagtgcga agacgtontc 240
agcgcgccc catgggggtgc caatcggcac ggcaggtatg ccgcgcgcaa cccgagcgcg 300
tggtgcatgc ccacggtcgc cangangcgc ancacccgcc aatgccgaan cccacgaaac 360
atcgggcgca tccaccttca acc 383

```

```

<210> 35
<211> 275
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 35
atactcaagc ttgcccagcc gtcgatgaca agaaatatgt ccgcaaaaga ctcagcggcc 60
gactttgtct gcagctggcg gtaocgcgcc accgagtcga tgccgtggtc gcggaagaat 120
gcctcccga ttgcacggc caattccatt ccgggaagca tccgcaatgc cagctgcggt 180
tgccccctgc cggccacggc acccaattgc ggcattgcgt ccacctgggc cagcgccccg 240
ccgccaatt ccaaacaata aaaattgcac ccggc 275

```

```

<210> 36
<211> 322
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 36

```

```

ccacccgtgt attttgggat gggcaaaaag gcggaagcacc gcgtagggccac gaacgccggg 60
agggacaatc tcggggcggt agggcttctc gcggaagggc ccgaacgtac ggcgtttcaa 120
cacgtcgcgt cggcctccga ccgcgaacat tcgggggatgg cagcaacctg gtagcaccct 180
ggccggggcga tgatctgcag cgtcgccgcg ggtagtcgcc gcccgggcgg ctacagtctg 240
aaacgcgatg accatcgatg tgtggatgca gcatccgacg caacggttcc tacacggcga 300
tatgttcgcc tccctgcccc gt 322

```

<210> 37
 <211> 167
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 37
ctgcccattgt ttggggagcg ccgaccagcc gatgctggag gcctacacgg cccttggtgc 60
gctggccacg gcgaccgagc ggctgcaact gggcgcggtg gtgaccggca atacctaccg 120
cagcngacc cctntcncaa naggatnttg ttcgcgggac ccnctc 167

```

<210> 38
 <211> 287
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 38
ccgactttcc gcggtacccg ctcaactttg tgtcgaccct caacgccatt gccggcacct 60
actacgtgca ctccaactac ttcactctga cgccggaaca aattgacgca gcggttcgcg 120
tgaccaatac ggtcggtccc acgatgaccc agtactacat cattcgacg gagaacctgc 180
cgctgctaga gccactgcga tcggtgccga tcgtggggaa cccactggcg aacctggttc 240
aaccaaactt gaaggtgatt gttaacctgg gctacgcgac cgccttt 287

```

<210> 39
 <211> 322
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 39
atactcaagc tttgtcacac caagtgtttc gaccaggcgc tccatccggc gagtggatac 60
tcccagcagg tagcaggtcg ccaccacgct ggtcagtcg cgttcagctc gcttgccggc 120
ctgcagcagc cattcgggga aatacctgcc ctggcgacg tgggggatcc caacttcaat 180
ggttgcggca cgggtgtcaa attcacgggtg gcggtagccg ttgccctaata tggaccgctc 240
atcgctgctt tcgcggtacc ccgccccgca cagggttcg gcttcagccc ccatcagggc 300
ggcaataaac ttcaagagca cc 322

```

<210> 40
 <211> 471
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 40
gaggcagctt cgccggcaat tctactagcg agaagtctgg cccgatacgg atctgaccga 60
agtcgctgcg gtgcagccca cctcattgg cgatggcgcc gacgatggcg cctggaccga 120
tcttgtgccg cttgccgacg gcgacggggt aggtggtcaa gtccggtcta cgcttggggc 180
tttgcggacg gtcccagcgc tggtcggggt tgcgccgcga aagcggcggg tcgggtgcc 240
tcaggaatgc ctaccgcgg cggcactgca cggccagtg cgcggcgatg tcagccatcg 300

```

ggacatcatg ctgcggttca tactcctcga ccagtcggcg gaacagctcg attcccggac 360
cgcccagcgc attggtgatg gaatcggcga acttggccac ccgctgggtg ttgacatcct 420
cgacgggtggg caattgcgcc tcggtaagct ttgccgcgta gccttttcat c 471

<210> 41
<211> 247
<212> DNA
<213> Mycobacterium tuberculosis

<400> 41
atactcaagc ttactgaca agggacgaat tcgtcggccg cctgttcgac tgggtggtgg 60
ccgagctggt cgccaccact caggccgcgg tcacggcggg accggcgcgg gagcaaactc 120
gcgcgggcat ggccaacttc ttgcggacca tcaccgcaga cgcccgttc ggacccctgc 180
tgtccaccac acagttggcc aacgcattaa tcaccgcaa gcttgcgga tccaccgcc 240
tgttcgc 247

<210> 42
<211> 325
<212> DNA
<213> Mycobacterium tuberculosis

<400> 42
tccatcaccc gatgtggcng gagcactgcc atgtcgatct caactaccac ctccggccgt 60
ggcggttgcg cgccccggg ggtccgcgcg aactcgacga ggcggtcgga gaaatcgcca 120
ncaccccgct gaaccgcgac caccgcgtgt gggagatgta cttcgttgag gggcttgcca 180
accaccgat cgcggtggtt gccaaaatc accatgcgtt ggctgacggt gttgcctcgg 240
caaacatgat ggcacggggg atggatctgc cgccgggacc ggaggtcggc cgctatgtgc 300
ctgacccgc tcctaccaag cggca 325

<210> 43
<211> 221
<212> DNA
<213> Mycobacterium tuberculosis

<400> 43
agctttgcag ttgctgagta atgtcggcca acgtcaccac aaccgcgatg aattcaatca 60
tgccgcccag ggcgccaac ccaatggtgg ccgcgagcgg cagctcgatc gcagcgcgga 120
ggttgccggc cgccagttga ttacgaaca gggtagggtc ataggcgggc aggatagtga 180
cgaaggcaag acctccatct gccgtcggaa gaagtatcga g 221

<210> 44
<211> 285
<212> DNA
<213> Mycobacterium tuberculosis

<400> 44
agcttcagaa caggcctggt gtgggcgcac ccggctcgcc gagttctgca cgcaccgcct 60
caagtgcggc ccgcaccgcc ggcattctcc ggtcacgcag ggccgcggcc cgcgcccgag 120
cgacggcgtg ttgcgcagt tcgcgctcaa tgatgctgac ctgatcggcc acccgggcgt 180
tctcggcgtc gtcgcgttca ctaatcgcg tgctcagcag cgtctcgaca gccaccacc 240
gagtggcgac cagctgctcc accacggacc gcagcgatgc ccgtc 285

<210> 45
<211> 179
<212> DNA
<213> Mycobacterium tuberculosis

<400> 45
ataactcaagc ttcagttcct ccacgacgcg ttcccaaattg aatttcccga tcccacaatc 60
tcggttcaga tacaggtcgc catacccctt acttcggcaa cgctgggcgg attggccctg 120
ccgctgcacc aaaccatcaa cgcttcaaa ttgccggcaa tctcgttcag ccaatccat 179

<210> 46
<211> 315
<212> DNA
<213> Mycobacterium tuberculosis

<400> 46
gctctacgcc gcctacgggt cgaacatgca tcccagacag atgctcgagc gcgcacccca 60
ctcgccgatg gccggaaccg gctgggttacc cgggtggcgg ctgacgttcg gcggcgagga 120
catcngctgg gaaggggcgc ttgccaccgt cgtcnaagac ccaaattcga aggtgttcgt 180
cgtgctctac gacatgaccc cggcggacga gaagaacctt gaccggtggg aaggctccga 240
gttcgggtatc caccagaaga tccgatgccg cgtggagcgc atttcctcgg acaccacaac 300
gggatcccgt cctcg 315

<210> 47
<211> 285
<212> DNA
<213> Mycobacterium tuberculosis

<400> 47
ataactcaagc ttgccaaaga gacctcgctc accaagcagg acgcgaccgt cgaggtggcg 60
atccggcttg gcgtcgaccc gcgtaaggca aaccagatgg ttcgcggcac ggtcaacctg 120
cccacaccgg cactggttaa gaactgcccg cgtcgcggtt ttgcgcggtg gtgaaaaggc 180
caatgcctgc gtttgccgtg ggggcggatg ttgtcgggag tgacaatctg atcaaaaagg 240
ttcagggcgg ttggctggaa ttcaatgccg caatcgcgac accgg 285

<210> 48
<211> 369
<212> DNA
<213> Mycobacterium tuberculosis

<400> 48
ccacggcgtg gatcaaggta ccggccggga tgttgcgcaa tggcagggtg ttgcccggt 60
tgatgtcggc gttagcgccg gattccacca catccccttg cgaaagtccg ttgggtgcaa 120
tgatgtagcg cttctcccca tcgagatagt ggagcaacgc aatccgtgcg gtacggttcg 180
ggtcgtactc gatgtgcgcg accttggcgt tgacaccatc tttgtcattg cggcgaaaagt 240
cgatcatccg gtaagcgcgc ttatgaccgc cgcttttgtg ccgggtggta atccggccat 300
gcgcgttgcg tccaccgcga cgtgcagcgg gcgcaccagc gacttctccg gggttgaccg 360
ggtnatctc 369

<210> 49
<211> 461
<212> DNA
<213> Mycobacterium tuberculosis

<400> 49

```
gcagcatgac ggcggtagcg aacaccgccg gatgcagcgc aagtagcgtc gatgtgctca 60
cggaatcgcc ccggcaccgc gatctcgang atcaccagtg ccaccccctg cagcgcnaca 120
ccgacgattc cgtacaccgc cagcccgatc aggccctggg ccatctgatt ggagctggcg 180
tanatggcgg cgatggtgac gatggccagc gccacataca ttgtggcggc cagaaccacg 240
gcgttggggc ggcggtcgat gaacactagg cgacgcagat cgcccggggg caacaggttg 300
accatcagaa agcctgcgac tagcacggcg gcgccactag gaagtacaag aangtggcca 360
ccaccccatg caggatcggg gtaaggctga tgggtccgaa atcgactccg gcctaataca 420
tgactctctc ctttgcgta tgccttact tgtgcgcgga a 461
```

<210> 50

<211> 127

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 50

```
gggacacacc tcgatgctgc cgcnatggac gcggtcgaac gcaagcagct gatcgagcta 60
caacgccgcg cggaacgctt ccgccgcggg cgtgacgcac cccgttgacc ggccggancn 120
ctctcta 127
```

<210> 51

<211> 305

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 51

```
tgggcgcctc tttcggcctt cccnntttaa acgnagcang acattctggg tatcgagttg 60
tactggatgg tgttggcgat gtcggtgacg ctgctcctgg cgggtgggac cgactacaat 120
ctgctgctga tttcccgggt gaaagaggaa attggggccg gattgaacac cggaattatc 180
cgtgccatgg ctggtaccgg gggagtgggt acggctgccg gcatggtgtt cgccgttacc 240
atgtcgttgt ttgtgttcag cgatttgcca attattgggt agatcggtac caccatcgcc 300
ttccc 305
```

<210> 52

<211> 449

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 52

```
ccgatcggcg ccgcantcgg ttggtgttnc ggatgaatcc gcagcgaaaa tgtagctgcg 60
gtggcgtgtc gtgactcgtn ggcgtcgacg ctcggtggcag ccaccgancg gttgggtccag 120
gatctggatg ggcaaagtgg tgcggcccgg ccggtgacgg ccgatgagct gaccgaggtc 180
gacagcgccg tgttggctga cttggaaccg acatggagtc gcccgggttg gcgtcacctc 240
aagcatttca atggttatgc gaccagtttt tgggttacgc cgtcagacat cacgtcggag 300
acttggatga gctgtgtctg ccagatagcc ccgaatcggg acgaccgtgg tcacggtgcg 360
tctgaccact cgggtcgggt cgcccgcgct atcggcatgg gtgcgtnatc acagcgacac 420
gcgcctgccc aaggangtnc ggnccgacc 449
```

<210> 53

<211> 160

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 53
 cggggttgagg atccacgcgt gggggttggtc agcagctacg gcactgaacc ggcggcacag 60
 ctgcgcgacg cgcttttcggt ggttctcgat cgactcgccg taggcgatgc gcagcgccgt 120
 ctgcaatata ggggtacacgt aggcgggcct tcccncctta 160

<210> 54
 <211> 308
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 54
 cttgattttg atcatcatga cgatcatcac cctaattttg ctaccgcac tggttatcgt 60
 gggtagcgtc gtgctttcca tgggcgcctc tttcgggctt tccgtattgg tctggcagga 120
 cattctgggt atcgatttgt actggatggg gttggcgatg tccgtgatcc tgctcctggc 180
 ggtgggatcc gactacaatc tgetgctgat ttcccgggtg aaaaaggaaa ttggggccgg 240
 attgaacacc ggaattatcc gtgccatggc tggtagcggg ggagtgggtg cggctgccgg 300
 catggtgt 308

<210> 55
 <211> 460
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 55
 ggggatccct agatcgacct gcaggcatgc aagcttgagg tgctgttcca acccgaattg 60
 gcttttcggcg ccacgcgtga ggcgggacac acctcgatgc tgccgccatg gacgcggctg 120
 aacgcaagca gctgatcgag ctacaacgcc gcgcggaacg cttccgcgcg gggcgtgacc 180
 gcatcccgtt gaccggggcg atcgcggtga tgcgtgatga cggcatcgcc accggagcna 240
 ctgtcaaggc ggcgtgccag gtgcggcggg cgcacgggtg ggacaagggt gtgctggcgg 300
 tcccgatcgg cccagacgac atcgtggcga gattcgncgg gtacgccgat gaggtggtgt 360
 gtttggcgac gccggcgtn gttcttcgcc nccggcangg ttaccgcaac ttcaccaga 420
 cctccgacga cgagggtggt gcgtctcctg gatcgtgctc 460

<210> 56
 <211> 299
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 56
 aaggctgcag gtcgaagcgg ntggttacga ctccctgtgt gtgatggacc agttctacta 60
 tctgcgtcta cacggccctt ggtgcgctgg ccacggcgac cgagcggctg caactgggcg 120
 cgttggtgac cggcaatacc taccgcagcc ccgaccctgc tggcaaagat natcaccag 180
 ctgcacgtgg ttagecgccg tcgagcgatc ctccggcatt gagccggcgg gtttgaactg 240
 gaacaccgcc agctcggtt cgagtcgggc atttcagtg accggttcaa ccggctcga 299

<210> 57
 <211> 373
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 57
 ctttcgcggg taccgctca actttgtgtc gaccctcaac gccattgccg gcacctacta 60

cgtgcactcc	aactacttca	tcttgacgcc	ggaacaaatt	gacgcngcgg	ttccgctgac	120
caatacggtc	ggtcccacga	tgaccagta	ctacatcatt	cgcacggaga	acctgccgct	180
gctacagcca	ctgcgatcgg	tgccgatcgt	ggggaaccca	ctggcgaacc	tggttcaacc	240
aaacttgaag	gtgattgtta	acctgggcta	cggcgacccg	gcctatgggt	attcgacctc	300
gccgnccaat	gttgcgactc	cgttcggggt	gttccagang	tcagcccggg	cgtcatcgcc	360
gacgctctcg	tcn					373

<210> 58

<211> 338

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 58

cggtcatagc	cctcgggtcc	ggccagcact	ccgcaggctt	cgtcgggggtg	gtcgcgacgc	60
gcatgggcca	ccatcgcat	caccaggctt	gcgcgaatca	ccagcacgta	gacggttcct	120
ttcctaagca	acaccgaagt	ttcacgaccc	gaatgctccg	ggaaacatgt	cacggtaggt	180
cggtattccg	gctaccggct	gagcattgag	cacgcgggcc	agcaccgcac	gagccaggca	240
atcagccgcc	gccgcaccga	tcgcgggtgac	cagctgagtc	tccggagaca	atgcggccgg	300
cacgcgggnc	tccggcggca	ccgctacngc	gcccgtgg			338

<210> 59

<211> 374

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 59

gtgatggcac	gccaccgcga	caccaccggg	ctgcgctacn	tcgagccata	ccgggcccggag	60
ctacatcggc	tcggccgccc	agtgttcggg	ccctctttcg	aggctcgagg	cgataccgat	120
ttgcgcatcc	gcancgcnc	cctggacgac	agaaccgtgc	cctacgagtg	cttgtcgggc	180
ggggccaaag	aacagcttgg	catcctggcg	cgattggccg	gcgcggcgct	ggtcgccaag	240
gacgacgcgg	ttccgggtgt	gacgacgac	gcgctggggg	tcaccgatcc	ggagcgacta	300
tcaagatggg	ggaggtctct	gacaccatcg	gccccnacgg	acatgtgatc	gtgccgacgt	360
gcagtcaccac	cccg					374

<210> 60

<211> 448

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 60

gcgaaagtcc	gttgggtgca	atgatgtagc	gcttctcccc	atcgagatag	tggagcaacg	60
caatccgtgc	ggtacggttc	gggtcgctact	cgatgtgcgc	gaccttggcg	ttgacaccat	120
ctttgtcatt	gcggcgaaaag	tcgatcatcc	ggtnngcgcg	cttatgaccg	ccgcctttgt	180
gccgggtggt	aatccggcca	tgcgcgttgc	gtccaccgcg	accgtgcagc	gggcgcacca	240
gcgacttctc	cggggttgac	cggtgatct	cggcgaaatc	agatacgctg	gcgccgcgac	300
gaccaggcgt	cgtgggcttg	tncttgcgaa	ttgncatgtc	taatcangtc	tttctctcac	360
gctctcgtcg	ccgggctagg	ccgcattgcc	ctgctctctc	tcategcttc	gctctgcate	420
gtccccgggc	taagcccgtg	ccccgaaa				448

<210> 61

<211> 356

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 61
gatggttcgc ggcacgggtca acctgccaca cggcactggt aagactgccc gcgtcgcggt 60
attcgcggtt ggtgaaaagg cccgatgctgc cgttgccgcg ggggcggatg ttgtcgggag 120
tgacgatctg atcgagagga ttcagggcgg ctggctggaa ttcgatgccg cgatcgcgaa 180
caccggatca gaatggccaa agtcggtcgc atcgctcggg tgctgggtcc gcgcggcctg 240
atgcccaacc cgaaaaccgg caccgtcacc gccgactccc catggcgtcc cggatatcaa 300
gggcgggcaa atcaacttcc cggttgatca gcaaggcaac ctgcctccnc ctccgg 356

<210> 62
<211> 336
<212> DNA
<213> Mycobacterium tuberculosis

<400> 62
atactcaagc ttcgtcataa gaccatggtg cgctttcttt caccgcgtcca gagtcggggg 60
catccgcacc ggctcgcata gcatcactct cccacgacgg gccgctcatc agcttggggc 120
atttcaatgt acttgatacc ccgcgctgcg ggtaggccac tgcgacaatt caaacacggg 180
gtcacacggg gaatagtgtc gagatgggct ctgatcaacc gtcgcaaacc cggtttcgca 240
tcaatagcgg aatcccaccg ggttgcatgg aggctgctga ccttggaata caaaattttt 300
tcattacaac aaaacaaccg ccncggaaac tttgca 336

<210> 63
<211> 489
<212> DNA
<213> Mycobacterium tuberculosis

<400> 63
cgaattcggc gtgcaccgct atggggttgca gcagcggctg gcgcgcgaca cccactggc 60
ccgggtggtt tcgccccgaa cccggatcat ggtgagcgaa aaggagattc gcctgttcga 120
tgctgggatt cgccaccgcg aggccatcga ccgattactc gccaccgggg tgcgagaggt 180
gccgcagtcg cgctccgctg acgtctccga cgatccatcc ggcttccgcc gtcgggtggc 240
ggtagccgtc gatgaaatcg ctgccggccg ctacctgcaa ggtgattctg tcccgtttgt 300
tcgaagtgcc tttcgcgata gactttccgt tgacctaccg gctggggcgt cggcacaaca 360
ccccggtgag gtcgtttttg ttgcagttgg gcggaatccg tgctctgggt tacagccccg 420
aactcgtcac ggcgggtgcgc gccgacggag ttgttatcac cgatccgttg gccgtaccgc 480
gccttgggc 489

<210> 64
<211> 448
<212> DNA
<213> Mycobacterium tuberculosis

<400> 64
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cggacagggt ggggtgcgtt tggggcaatg acagggtggc gcggtgcgtt cgggtcggcc 120
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gcaacggtca ccaagctggc gctggccatc gccgcgatag ccagtgcgc caatcgtecc 360
ttgcgacgtg tcaagtnggg gtccacctga tgcattggca aagaacctac cgtgttaacg 420
gcncaacnca aggaccgcgc cggtcgcn 448

<210> 65
<211> 346
<212> DNA
<213> Mycobacterium tuberculosis

<400> 65
tttccgcggt acccgctcaa ctttgtgtcn accctcaacg ccattgccgg cacctactac 60
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aattcgggtcc gtcccacgaa agaaccagtt ttncntcttt cncacggaga acctgccgct 180
gctagagcca ctgcgatcgg tgccgatcgt ggggaaccca ctggcgaacc tgtgtttcaa 240
ccaacactta gagtgttaatt gtaaacctgg gctaggggaa accggctcta gtttttccac 300
cntctccgcc ccntgttttcg aatactccgt tcgggttgtc cccaaa 346

<210> 66
<211> 277
<212> DNA
<213> Mycobacterium tuberculosis

<400> 66
gcttccgggt cgtatgttgt gtggaattgt gaccggatac caatttcaca caggaaacag 60
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ctgggtgggccc gaccacttcg atggcacgac ccgtgaactg ctgcccggcc aattcttctt 180
ggtcgcccgg accgatggac cgcggctggg attccagaag gtgcccgatc ccgcccctgg 240
gaaaaaccgc gtgcacctct acttcacgac caacgac 277

<210> 67
<211> 434
<212> DNA
<213> Mycobacterium tuberculosis

<400> 67
ccgatcgact gatgcgccga caaccacgcc ccaacaactg .gaatgaaccg tcgtgaccat 60
catcagcacg cggttgtagg cgacttgcca catgttcaac ccgccgtact cggacggaat 120
cttcaaaccg aaacagccca gctcgccag gcctttcacg tactcgtcgg ggatctgggc 180
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cgctcgggtt cgggcctcct cggcgccga cggcttgga aatgggtgta tgagccctac 300
gggaaaccgg ccacaaaga gttctttggc gaaggacggt ttatcccaac cactttcgcg 360
agattcctcg gcaagggccg gcgcttgctc ctcggtgacc tgagtttgct gtgccatcgc 420
cgctcctcc ctga 434

<210> 68
<211> 465
<212> DNA
<213> Mycobacterium tuberculosis

<400> 68
tgcacccggc tcgtatgttg tgtggaattg tgagcggata acaatttcac acaggaaaca 60
gctatgacca tgattacgcc aagctattta ggtgacacta tagaatactc aagcttttac 120
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tggggtgttt cggcgaccgg cagccagggt gtccacactg ccgacgggcg ccgcgagccg 420
ttcaccgacc aggcgcgcga gcaagtccgc ccgatcgcat actcc 465

<210> 69
<211> 463
<212> DNA
<213> Mycobacterium tuberculosis

<400> 69
gggggcgctg ctggtatagt cgctgaccgg tgcaggtttc gacaatgtgg tgccggttcg 60
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cggaaagacg cagatcgccg tcaagcatgt gtgccgcgga ttatcaggac tgacctcctg 240
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tgcgcaaacg atggcgcgag ttacggtcgc gcgggggtgc gcctggcgcc ggccagagca 420
cgagttcacc gatgcgcagc tagtggcgac agcgtcagcc aac 463

<210> 70
<211> 447
<212> DNA
<213> Mycobacterium tuberculosis

<400> 70
tgcttccggc tcgtatgttg tgtggaattg tgagcggata acaatttcac acaggaaaca 60
gctatgacca tgattacgcc aagctattta ggtgacacta tagaatactc aagcttccgt 120
acaggtcgcc tccaacacgg cggggaagcg acaccagcct accgagcttg gagtccagga 180
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cgataccgta ttgcgtcaat tgggacgcgg ttgtgcattc ggctagctcg gttgccacac 360
ccgtcagggg ttcgacggtt gcgggttcgg cgggccccag caccgctgtc accatgcccg 420
ccaagccgac ctgcggcgcc accaact 447

<210> 71
<211> 460
<212> DNA
<213> Mycobacterium tuberculosis

<400> 71
cggcatgacc accgacaggc ccgactggtc gtaccactcg aacgcggggg tgttgatgtc 60
ccagccgctg aagtcgtcct gcgcgcgcag gccgtcgagc aggtacaggg cgggcgagtt 120
ggcaccacca ctttggaatt ggaccttgat gtcacggccc atcgacggcg acggcacctg 180
caggtactcc accggcaagc ccggccggga aatgcccc gcggtcgccc tgccaccgac 240
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catctcaacg catccatgca tgtttgggcy catcctgaat tangtcagac tgcaggcgct 420
gggcggcgag tgctcgtgta tcaaccacaa cttcgggcgt 460

<210> 72
<211> 404
<212> DNA
<213> Mycobacterium tuberculosis

<400> 72
ttccaaccct aattggcttt cggccccatc cgtgaggacg ggggtgcgggt gctcaacaac 60

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aacgtcgtcc gcgggacaca cctctatgct gccgccatgg acgcgggtcca acgcaagcag 120
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ccaaacgaca tcgtggcgag attcgccggg tacgccgatg aggtgggtgtg tctggcgacg 360
ccggcggttg tcttcgccct cgggcagggt taccgcaact tcac 404

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<210> 73
<211> 465
<212> DNA
<213> Mycobacterium tuberculosis

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<400> 73
caggcatgca agctttccgc cgatacccg ccatgtcgcgc acatccagga cttctggggg 60
gatccgctga cagcggcggg atcccaaagt gccgatgatc gggccgccta cgtcgtggtg 120
tacctcgtcg gtaacaacga aaccgaagcg tatgactcgg tccacgcggt gcggcacatg 180
gtggacacca caccgccacc gcacggggtg aaggcctatg tcaccggtcc ggcagcactc 240
aatgccgacc aggcgagggc cggagacaaa agtatcgcta aggtcaccgc cgatcacnag 300
catggtgatc gcagcaatgt tgctagtgat ctatcgctcc gtaattaccg cggttctcgt 360
cttgatcatg gtcggcatcg actcgcccaa tccgcggatt catcgcttg ctcgccgaac 420
acaacatttt cacctttcac atttgacca acctgctctt ctcac 465

```

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<210> 74
<211> 387
<212> DNA
<213> Mycobacterium tuberculosis

```

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<400> 74
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gcaccgcttg gccacnaacg ccgggagggg caatctcggg cggctatggc ttctcccggg 120
aaggcccaa cgtacggcgt ttcaacacgt cgcgtcgccc tccgaccgcg aacattcggg 180
gattggcacc aacctgntac caccctggcc gggcgatgat ctgcagcgtc gccgcgggta 240
gtccccgcc cggcggttac agtctgaaac cccgatgacc atcgatgtgt ggatgcagca 300
tccgacgcaa cggttcctac acggcggata tgttctctc gctgcgccg tggaccggtg 360
ggtctatccc ctgaaaccga catcccn 387

```

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<210> 75
<211> 445
<212> DNA
<213> Mycobacterium tuberculosis

```

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<400> 75
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acggagtcaa ctaccgggcc aacggtgatt tcttggccgc cgctgacggc gcgaacgacg 120
ccagcgacca cattcagcag atggccagcg cgtgccgggc cagcaggttg gtgctcggcg 180
gctactccca ggggtcgggc gtgatcgaca tcgtcaccgc cgcaccactg cccggcctcg 240
ggttcacgca gccgttgccg cccgcagcgg acgatcacat cgccgcgac gccctgttcg 300
ggaatccctc gggccgcgct ggcgggctga tgagcgccct gacctctcaa ttcgggtcca 360
agaacatcaa cctctgcaac aacggcgacc catttgctcg gacggcaacc ggtggcaacg 420
cacctaagct acttgcccg gatga 445

```

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<210> 76
<211> 345

```

<212> DNA
<213> Mycobacterium tuberculosis

<400> 76
gtttatgcac tggtttaggtg tttccatgag tttcattctg aacatccttt aatcattgct 60
ttgctgtttt ttattaaatc ttgcaattta ctgcaaagca acaacaaaat cgcaaagtca 120
tcaaaaaacc gcaaagttgt ttaaaataag agcaacacgt acacaaggag ataagaagag 180
cacatacctc agtcacttat tatcactagc gccgcgcgca gccgtgtaac cgagcatagc 240
gagcgaactg gcgaggaagc aaagaagaac tgttctgtca gatagctctt acgctcagcg 300
caagaagaaa tatccaccgt ggggaaaaac tccaggtaga ggtac 345

<210> 77
<211> 139
<212> DNA
<213> Mycobacterium tuberculosis

<400> 77
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gcccggcata cgggtggtgta ccgatctccg cgtcatacac ccgcgggtaa tcgccgacgg 120
tgccggttcg cgagccgaa 139

<210> 78
<211> 298
<212> DNA
<213> Mycobacterium tuberculosis

<400> 78
agctttatcg aaagcgcgaa cagctcgcgg cggcccacga cgtgctgcgt cggattgccg 60
gcggcgagat caattccagg cagctcccgg acaatgcggc tctgctggcc cgcaacgaag 120
gactcgaggt caccgccgtg cccggggctg tgggtgcacct gccgatcgca caggttggcc 180
cacaaccggc cgcttgatgc ccggtcggca agcccggcag ttgccaaacc catcgtgatc 240
aggctcggct cgcgagttcg gcgaagaaat ggttcgcctg atcacctacc atcggcca 298

<210> 79
<211> 300
<212> DNA
<213> Mycobacterium tuberculosis

<400> 79
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ggcggagcta catcgggccg gccgcccagt gttcggggcc tctcgcccag gtcgaggtcg 180
acaccgattt gcgcatccgc agccgcaccc tgcgacgaca gaaccgcggc cctaccact 240
gcttgtcggg cggggggcaa agaaccagct tgnatcctg ccacaattgg ccggcgcccg 300

<210> 80
<211> 321
<212> DNA
<213> Mycobacterium tuberculosis

<400> 80
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atagatgacg accgggacct cgtcggcatc ttccatagcc cgccacacct tcagttgctc 120

accggaatcc	aaccggtaga	aggctcgcca	gcgctcggca	ttggatcatcg	ggatatgccg	180
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gcgacgcgca	tgggccacca	tcgcattcac	caggctctcg	cgaatcacca	gcacgtagac	300
ggttcctttc	ctaagcaaca	c				321

<210> 81
 <211> 340
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 81						
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gcccagcccc	gtaccaatca	gcccggcaac	gagggattcc	gtcnttatca	gccnaaataa	180
ctgctctcgg	gtaccacca	aacagcgcaa	tatggcgaaa	aacggtcgcc	gttgcacaa	240
attaaatgtc	tcggtattgt	tgattaaaaa	gataccacc	accagggcaa	tccaactgag	300
agcgggttaa	ttgaccgtaa	aaacctccc	tcctctgttt			340

<210> 82
 <211> 394
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 82						
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ctgtgtatgc	acggcatacg	gacatccttc	ccctgatacc	cgcggtcgaa	ccagccacgt	120
gtccatcatc	aggggtcaac	cccggccaag	ggcgacggca	cgccaagtcc	gccgaccgtt	180
aacctagtgc	tgtagcttc	atttgctgcg	agcaaaacag	ctggtcggcc	gttaggaact	240
gaattgaaac	tcaaccgatt	tggtgccgcc	gtaagtgtcc	tgtctgcggg	tgcgctggtg	300
ttgtccgcgt	gtggtaacga	cgacaatgtg	accgggggag	gtgcaaccac	tgccagggcg	360
tccgcgaaag	tccattgcng	ggggaagaag	acac			394

<210> 83
 <211> 487
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 83						
gaaagtgcgc	caaggtggtg	gtgaaactcg	ctggacggtc	cccaggatgt	tggcagcaca	60
ttcaccggac	atgaccggag	caagaccgga	catcctccca	taccgtcgtc	gccgtgtaca	120
tccgtagccc	gtcctggcag	gtgctgggtt	gaacaaaatc	agcccaacac	ctgccacgac	180
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tatctacggg	accgctgcgg	cgctgggtgt	tcccaccgtg	ttcttccac	acctggatcc	300
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cggcgcgccc	gtctttggat	actttggaga	cgcctcggc	cgccagaaga	ccctggtcgc	420
cacactgttg	atcatgggcc	tggaaccgt	gactgttggg	ctggttccac	gacagtggcc	480
atcgcg						487

<210> 84
 <211> 418
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 84

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tcccagcagg tagcaggctc ccaccacgct ggtcagtgcg cgttcacctc gcttgccggc 120
ctgcagcagc cagtcgggga aatagctgcc ctggcgagc ttggggatcg cgacgtcgat 180
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cggcgatgaa cgtcgagagc agcccgcgca gcaaatacgg gctcgctgt gcgagttggt 360
cagccagaag ctgctcggtg tcataagatg agaagaggtc agtgcgtcct ttccttcg 418
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<210> 85

<211> 399

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 85

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caggcatgca agctttttga gcgtctcgcg gggcagcttc gccggcaatt ctactagcga 60
gaagtctggc ccgatacgga tctgaccgaa gtcgctgcgg tgcagccac cctcattggc 120
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ggccagtgcc ccggcgatgt cagccatcgg gacatcatgc tcgcgttcac actcctcgac 360
cagtcgcggc aacagctcca ttcccgacc gcccaacgc 399
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<210> 86

<211> 474

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 86

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atactcaagc ttttggtctg gtcgccttcc aattcagcgt gcaccgctat gggttgcagc 60
agcggctggc nccgcacacc ccactggccc ggggtgtttc gccccgaacc cggatcatgg 120
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gaatccgtgc tctgggttac agccccgaac tcgtcacggc ggtgcgccgc cgac 474
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<210> 87

<211> 383

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 87

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tggggtgcc atcggcacgg caggtaggcc gcgcgcaacc ccaacgcgtg gtgcatgcc 360
cggtcgcgag gaggccacca ccc 383
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<210> 88

<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

<400> 88
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gatcgacggn cgttggtcgg ggttgactgg ccgcccggcg agcagggcgt caaccgcggc 120
ccggacgtcg gcggccgtca ccggtcggcc attgcccggg cgggagtcgt cgagctgacc 180
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ggcggcgacg tgtcgcccgt accggccagt ggttc 455

<210> 89
<211> 429
<212> DNA
<213> Mycobacterium tuberculosis

<400> 89
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accaccgaca gtaacgtcac tacggcgccc acgcgcgacg cgaaccacca cgcacatgat 420
gatcggtcg 429

<210> 90
<211> 321
<212> DNA
<213> Mycobacterium tuberculosis

<400> 90
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ccaccgattc gcccgaaatac agctttcagc ggctcccaaa gttgatcatc gaccggctgc 240
cggatatccc gcaacttgcg tgggcgggtca ccggcgcccc gctcggactg gaccggccgt 300
ggttcgtcga ggaccacgaa c 321

<210> 91
<211> 134
<212> DNA
<213> Mycobacterium tuberculosis

<400> 91
caggcatgca agcttcatgc ccgcggcatg atagccacat gcacgcaatc gaactcagcg 60
aaaccggcgg gccaggcgtc ttacgccacc tcaccagcgc gcaacctcaa cccggccacg 120
gagacctcct gatc 134

<210> 92

<211> 513
<212> DNA
<213> Mycobacterium tuberculosis

<400> 92
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ctggcaggac attctgggta tgcagttgta ctggatggg ttggcgatgt cggatgaccc 180
gctcntggcg gtgggatccg actacaatct gctgctgatt tcccggttga aagaggaaat 240
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tcgttcatga aaccgtccat tgctgccctg ctgggacctg gttctgggtg ccgctacggg 480
tgcgccccgcg cccggcagtc aaatcttcgc ccg 513

<210> 93
<211> 345
<212> DNA
<213> Mycobacterium tuberculosis

<400> 93
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gacggcgtgc ggggtgctcaa cgacgacgtc gtccgcggga cacacctcga tgctgccgcc 120
atggacgcgg tcgaacgcaa gcagctgac gagctacaac gccgcgcgga acgcttccgc 180
cgcgggcgtg accgcatccc gttgaccggg cggatcgcg tgatcgtcga tgacggcatc 240
gccaccggag cgacggccaa ggcggcgtgc caggtcgccc gggcgcacgg tgcggacaac 300
gtggtgctgg cggtcceccat cggcccagac gacatcgtgg cgaga 345

<210> 94
<211> 302
<212> DNA
<213> Mycobacterium tuberculosis

<400> 94
ataactcaagc ttttacggtg atcgcgcac accgtggttca tgaactggaa gcagcgcagc 60
gttctctttt cggccgcaac atgagccagc ctctcgtcgg cggtcgggtg cagggtgctc 120
ggcagctcgg ccgcgacagc cgctgaccc tgaaccagc ttccatatcc cgcgacgaac 180
gacgccagtc cgctacgtaa cccctccgcg actgtccatg gacaacagcg cgttctccac 240
cgaccggggc cgggtgtggg gtgtttcggc gaccggcagc cangtggtcc aactgccga 300
ag 302

<210> 95
<211> 286
<212> DNA
<213> Mycobacterium tuberculosis

<400> 95
tagtcgctga ccggtgcagg tttcgacnat gtggtgccgg ttcggcggct acgtgccatc 60
gagacactgg cgcaggctat cgcaccggtt atcggctacg agcaaatacg ggtatgcgtt 120
cttgagcatg agtcggcgac cgtcgtcatg gtcgacaccc acgacggaaa gacgcagatc 180
gccgtctanc ntgtgtgccg cggattatca ggactgacct cctggctgac cggcatgttt 240
ggtcgcgatg cctgggcgcc ggccggcggt gtcgtggctg gctcgg 286

<210> 96
<211> 482
<212> DNA
<213> Mycobacterium tuberculosis

<400> 96
ataactcaagc tttccgccga taccgcgcat gtcgcgcaca tccagaactt ctgggggggat 60
ccgctgacag cggcgggata ccaaagtgcg gatgatcggg ccgcctacgt cgtgggtgtac 120
ctcgtcggta acaacgaaac cgaagcgat gactcgggtcc acgcggtgcg gcacatgggtg 180
gacaccacac cgccaccgca cgggggtgaag gcctatgtca ccgggtccggc agcactcaat 240
gccgaccagg ccgaggccgg agacaaaagt atcgctaagg tcaccgcgat caccgagcatg 300
gtgatcgcat caatgttgct agtgatctat cgcgccgtaa ttaccgcggt tctcgtcttg 360
atcatggctg gcatcgacct cggcgcaatc cgcggattcn tcgccttgct cgccgaccac 420
aacattttca gcctttcaac atttgcgaca acctgctcgt tctcatggcg attgcngcga 480
ac 482

<210> 97
<211> 395
<212> DNA
<213> Mycobacterium tuberculosis

<400> 97
caggcatgca agcttggcgt gccgttccaa cccgaattgg ctttcggcgc catcgggtgag 60
gacggcgtgc ggggtgtcaa cgacgacgtc gtccgctgga cacacctcga tgctgccgcc 120
atggacgcgg tcgaacgcaa gcagctgata gagctacaac gccgcgcgga acgcttccgc 180
cgcgggcgtg accgcatccc gttgacccgg cggatcgccg tgatcgtcga tgacggcatc 240
gccaccggag cgacggccaa ggcggcgtgc caggtcgccc gggcgcacgg tgccgacaag 300
gtgggtgctg cgggtccgat cggcccagac gacatcgtgg cgagattcgc cgggtacgcc 360
gatgaagtgg tgttggttgg cgaccgcggc ttggt 395

<210> 98
<211> 439
<212> DNA
<213> Mycobacterium tuberculosis

<400> 98
ataactcaagc tttggcattg tgcacatttt ccaccgcgtc tctattaatg ctgagccgct 60
aattgtgacc ccagtcggga aacacgcgga gcaccaaatt caccgcagcg gccggggcgg 120
ttcaactcac catggatcgc tctcgtcgtc tgggtgtgga caatcgtcgc tgtagcgcgt 180
cgcgaaacacc tcagcttctg ctgcgcgggc ttcttcggc gatggtaacc ccaggtttc 240
gccacgggtc ttacgtagca gtgcgacgg gtgttcattt gcatcgacct gttgactcat 300
cctgtcaagg atgaaggcgt actgggcgga ctgcgccttc tgccgcgcca ggtcggcaat 360
caccaggatc tcagaaacga gctgcgactc actcttcag gccaccctgg ccgaaagctc 420
gacatggtca atccggccg 439

<210> 99
<211> 348
<212> DNA
<213> Mycobacterium tuberculosis

<400> 99
caggcatgca agcttgcggg ccggagtggg ttgcacggcc gctcgtttct cggcatcggg 60
ttgggctgtc accagcagtt ggtagttctt cactactgt tgttcgagcg tcgagccgcc 120
gcgcgtgtcg aggtcgcggc acgcgtatcc cgccaggccg gtcagggtgc ccttccagtc 180

cacgcegctg	tggtcggcga	accgcttata	ttcaatcgag	acgatcgcca	gcttcacgt	240
gttggcgatc	ttgtccgagg	gcacctcgaa	ccggcgctgc	gagtacagcc	acgcgatcgt	300
gttgcccttc	gcgtcgacca	tcgtcgatac	cgcaggcact	tgcccttc		348

<210> 100
 <211> 436
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 100						
ataactcaagc	ttcccggcgg	ccagtaccga	aagcgcgaac	agctcgcggc	agcccacgac	60
gtgctgcgtc	ggattgccgg	cggcgaaatc	aattccaggc	agctcccgga	caatgcggct	120
ctgctggccc	gcaacgaagg	actcgaggtc	accccgggtg	ccggggtcgt	ggtgcacctg	180
ccgatcgac	aggttggccc	acaaccggcc	gcttgatgcc	cggtcggcaa	gcccggcagt	240
tgccaaaccc	agcgtgatca	ggctcggctc	gcgagttcgg	cgaagaagtg	gctcgcctga	300
tcacctacca	tcggccagga	tctgcgtgtc	atcacaacgc	tcgccaagga	ggttggtgtg	360
gtgctatcga	cggcctttag	ccagatgttc	ggaatcgact	atccgatagt	gtccgcgcca	420
atggacttga	tcgccg					436

<210> 101
 <211> 445
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 101						
agcttcgggtg	tagccgatca	ccggaagccg	catgatcagc	cacgtttcgc	gccgcccggc	60
atacggcggc	gtaccgatct	ccgcgtcata	caccgcggg	taatcgccga	cggtgccgggt	120
tcgcgagccg	aaggtgacga	cgtcgattga	atcgagttcc	aggtccagcg	ggtggcgcag	180
caacggcgcg	agctcaacga	cgtcaatcac	gttgctcgtt	tctacggtca	ccgaccgggt	240
gaccgtagtc	gcccgggtgcg	ctcggccgag	aagttgcacc	gccaccaccg	cgacaccgtc	300
ttgcacgcgg	acgccacccc	cggatcggtt	gttggccaaag	gtaattgggt	cattccattt	360
gacgggacgc	cgaccccgcga	gccccagtag	cgcaccagac	cacgcccggct	gaccaccac	420
tgtacgaaca	ccaaggcgac	gccga				445

<210> 102
 <211> 261
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 102						
ataactcaagc	ttcgggtggct	tcgcccggcc	tgccgggtgg	acttcatgac	aacgcggggg	60
cgattacccc	cgctaccgcc	agcagcatga	cggcggtacc	taacaccgcc	cggatgcctc	120
gcacgtgcct	cgatgtgctc	acggaatcgc	cccggcaccg	cgatctcgag	gatcaccagc	180
gttacccccg	gcagcgcgac	accgacaatt	ccgtacaccg	ccacgccgat	ccggccctgg	240
gccagctgat	tggagctggc	g				261

<210> 103
 <211> 244
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 103						
caggcatgca	agcttcacac	tgtacggatc	cacgaacatc	ccgttgaact	gacaggtgcg	60

```

gcccggtcgc atcaggccgg ccacttggtc tacgcgggta ccgaagatct cttcggtgac 120
ctgcccgcgc cgggccagct cggcccagtg cccggcggtg gccgccgcgc cgacgatctt 180
ggcgtccacg gtggtccggg tcttgcccgc tagcacgac cgcgagtcgc ccggtcaccc 240
gggt
244

```

```

<210> 104
<211> 376
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 104
atactcaagc tttccaagtc ccaagtgtcg atcatggcca aagagctcga caaagccgta 60
gaggcgtttc ggaccgcgcc gctcgatgcc ggcccgtata ccttcctcgc cgccgacgcc 120
ctggtgctca aggtgcgcga ggcaggccgc gtcgtcgggg tgcacacctt gatcgccacc 180
ggcgtcaacg ccgagggcta ccgaaagatc ctgggcatcc aggtcacctc cgccgaagac 240
ggggccggct ggctggcggt cttccgcgac ctggtcgccc gcggcctgtc cggggtcgcg 300
ctggtcacca gcgacgccc cgccggcctg gtggccgcga tcggggccac cctgcccgcg 360
gcggcctggc agcgct
376

```

```

<210> 105
<211> 284
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 105
caggcatgca agcttcacac gtaggcgcgc tcgataaatg actccgcgcg gcttcgcaca 60
tcctcgtagc gatccttggc gagcaggta accgggcgct gcccgtcgag gagccggttt 120
ttggcgtgca gccactggcc gacacctcgg ggggtaagcg aatccgagag caggaggacg 180
aggtcacgaa gctgcgccag ccggtcgtac cgctcagggc ggatgtcgcc ggtccgccac 240
ccgcgtaccg cccgatcgga cacctgtatg accgcggcga cgtc
284

```

```

<210> 106
<211> 140
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 106
cgcggcggcg cattaccccc gctaccgtca gcagcttgac ggcggtagcg aacaccgcgc 60
gatgcagcgc aggtgcgtct atgtgcacac ggaatcgccc cggcaccgcg atctcgagga 120
tcaccagtgc ccgcccctg
140

```

```

<210> 107
<211> 491
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 107
gggatcgagg aacagcgcgt tgaactgata ggtgcggccc ggctcgagca ggccggccat 60
ttgttcgatg cggttaccga agatctcttc ggtgacctgc ccgccgcgcg ccagctcggc 120
ccagtccccg gcgttgccgc ccgcggcgac gatcttggcg tccacggtgg tcggggtcac 180
gccgcgagc aggatcggcg agcggccggt cagccgggtg aacttcgtcg agagcttgac 240
cctgccgtcg gggaggcgaa ccacggtcgg tgcgtatctc gaccaggccc gggcaacctc 300
gggggtggcg ccgacggtga acaggttgcg ctggccaccg cgggtagccg ccggcactat 360

```

```

gccgatgccc aggccgcgga tcaccgggtgc ggtcagtcgg gtcaggatgt cgccccggccc 420
caggtcgaag atccagcggg cgccgggccgc gtggacacng gtgatctcgt ccaccatcga 480
ctttctgatc a                                     491

```

```

<210> 108
<211> 364
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 108
taactcaagg cttgcgttga ggccccaggc ccatcgacgg tttggcggcc ttaaattgcac 60
tgaggtcgtc aattgacccc acagcggaaa tgccgactat tcgcaggcct ctttcgcctt 120
ggctgccgga gaggggctcc gcgggaaccg catgcaggta tatgacctcg gtttctcggg 180
tgctaccgcg tgccttgctg aggatgaact cggcgttggg attgtccagc cggcccaatt 240
catcgagcgc agattcgta acatggccgg cggcgacata cgcttcaccg tggatctgct 300
ccacacggac cgccctgtcg ggatcctgct cacgggtaaa ggaacttaac tggcnctcgg 360
tgcc                                     364

```

```

<210> 109
<211> 453
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 109
ccttctgcgc caccacacc gtcaacgccc gcgaagtcca cgtcgtccag gccatcggcg 60
gcctcacgga tggattcggc gcggacgtgg tgatcgacgc cgtcggccga ccggaaacct 120
accagcaggc cttctacgcc cgcgatctcg ccggaaccgt tgtgctggtg ggtgtgccga 180
cgcccgacat gcgcctggac atgccgctgg tcgacttctt ctctcacggc ggtgcgctga 240
agtcgtcgtg gtacggcgat tgccctgccc aaagcgactt cccacgctg atcgaccttg 300
acctgcatgg ccggctgccg ctgcagcggg tcgtttccga acgcacgagg ctcgaagacg 360
tcgaggaggc gttccacaag atgcatggcg gcaaggattt gcgttcgggtg gtgatgttgt 420
gatggccgcc atcgagcgcg tcatcaccga cgg                                     453

```

```

<210> 110
<211> 329
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 110
atactcaagc ttgatattga tcatcatgat gatcatcacc cgaagtgtgg tagccgcagt 60
ggttatcgtg ggtaccgtcg tgctttccat gggcgccctt ttccggcttt ccgtattggg 120
ctggcaggac attctgggta tcgagttgta ctggatggtg ttggcgatgt cggatgatcct 180
gctcctggcg gtgggatccg actacaatct gctgctgatt tcccggttga aaaaagaaat 240
tggggccgga ttgaacaccg gaattatccg tgccatggct ggtaccgggg gagtggttac 300
cgctgccggc atggtgttcg ccgttacca                                     329

```

```

<210> 111
<211> 438
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 111
attgnctttc ggcgccatcg gtgaggacgg cgtgcgggtg ctcaacgacg acgtcgtccg 60

```


cgggacacac	ctcgatgctg	cgcgatgga	cgcggtcgaa	cgcaagcagc	tgatcgagct	120
acaacgccgc	gcggaacgct	tccgccgcgg	gcgtgaccgc	atcccgttga	ccggggcggat	180
cgcggtgata	gtcgatgacg	gcacgcccac	cgagcgacg	gccaaggcgg	cgtgccaggt	240
cgcccgggcg	cacggtgcgg	acaaggtggt	gctggcggtc	ccgatcggcc	cagacgacat	300
cgtggcgaga	ttcgccgggt	acgcccgatga	ggtggtgtgt	ttggcgacgc	cggcgttggt	360
cttcgccgctc	gggcagggtt	accgcaactt	caccagacc	tccgacgaag	aagtgggtggc	420
gttttctgga	tcgtgctc					438

<210> 112
 <211> 438
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 112						
atactcaagc	ttttcccgtc	cgtcatcgcc	caagcgcgctg	aggccgaagc	ggctgggttac	60
gactccctgt	ttgtgatgga	ccacttctac	caactgccca	tgttggggac	gcccgaccag	120
ccgatgctgg	aggcctacac	ggcccttggt	gcgctggcca	cggcgaccga	gcggctgcaa	180
ctgggcgcgt	tggtgaccgg	caatacctac	cgcagcccga	ccctgctggc	aaagatcatc	240
accacgctcg	acgtgggttag	cgcgggtcga	gcgatcctcg	gcattggagc	cggttggttt	300
gagctggaac	accgccagct	cggcttcgag	ttcggcactt	tcagtgaccg	gttcaaccgg	360
ctcgaanagg	cgctacagat	cctcgagcca	atggtcaagg	gtgagcgcca	acgttttttcg	420
gcgattggta	cccaccga					438

<210> 113
 <211> 482
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 113						
cggccaccgg	ggccactccg	cacaatctgt	acccgacca	gatctacacc	atcgaatac	60
acggcgctcg	cgactttccg	cggtaccgc	tcaactttgt	gtcgaccctc	aacgccattg	120
ccggcaccta	ctacgtgcac	tccaactact	tcactctgac	gccggaacaa	attgacgcag	180
cggttccgct	gaccaatac	gtcgggtcca	cgatgaccga	gtactacatc	attcgcacgg	240
agaacctgcc	gctgctagag	ccactgcat	cggtgccgat	cgtggggaac	ccactggcga	300
acctggttca	accaaacttg	aaggtgattg	ttaacctggg	ctacggcgac	ccggcctatg	360
gttattcgac	ctcgccgccc	aatggtgcga	ctcgttcggg	gttggttcca	gaggtcagcc	420
cggtcgtcat	cgccgacgct	ctcgtcgccg	ggaccagcag	ggaatcggcg	atttcgccta	480
ca						482

<210> 114
 <211> 388
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 114						
atactcaagc	ttgggggtggc	gctgtcggtc	ggtgtgcttg	gcggcgctcg	tatcaacacc	60
gcccacgaaa	tggggcacaa	gaaggattcg	ctggagcggg	ggctgtccaa	aatcaccctc	120
gcccagacct	gtacgggca	cttctacatc	gagcacaacc	gtggccatca	cntccgggtg	180
tccacaccgg	aggaccggc	gtcggcgcg	ttcggcgaaa	cgttggtggga	gttcctgccc	240
cgcagtgtta	tcggcggtt	gcgctcgcc	gttcatttgg	aggcccaacg	gctgcgtcgg	300
ctcggcgta	gcccctggaa	tcccatgacg	tatctgcgca	acgacgtgcn	caacncgtgg	360
ctgatgtcng	tggtgttgtg	gggtgggc				388

<210> 115
<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

<400> 115
tcgccaccgc accgcggcga acgctcaaag gcacctactg gcaccaaggc cccacacgtc 60
accctgtgac ctcttgcgcc gaccccgccc gaggtcctgg ccgttaccac cgaacggggc 120
agccgggagt ctggtacgca tcgaacaaag agcaagggtg atgggcggag ttgttccgcc 180
acttcgtcga tgacggggtc gatccattcg aggtccgtcg ccgcgtcggg cgagtggcgg 240
tcacactcca ggtactcgac ctacacagac agaggactcg atcccatcta ggtgtggacg 300
aaacagatct tctgtccgac gactacacca ccaccaggc catcgccgcc gcccgcgatg 360
ccaacttcga cgcggtactg gccccggcgg cggcgctccc cggttgtcaa acactttgcc 420
gtgttcgttc acgcactgcc caacatcgag cccga 455

<210> 116
<211> 328
<212> DNA
<213> Mycobacterium tuberculosis

<400> 116
atgaaataag aagagcacat ccctcagtcg gttatcatca ctacgcgtcg ccgcacccgt 60
gtaaccgata atagcgagcg aactggcgag gaagcaaaga atatctgttc tgtcagatag 120
ctcttacgct cagcgcaaga agaaatatcc cccgcgggaa caactccagg tagaggtaca 180
cacgcggata gccaattcag agtaataaac tgtgacactc acaccctcat caatgatgac 240
gaactacacc ccgatatccg gtcacatgac gaagggaaag agaaggatat catctgtgac 300
aaactgcctt caaatttggc ttccttaa 328

<210> 117
<211> 318
<212> DNA
<213> Mycobacterium tuberculosis

<400> 117
atactcaagc ttgtcgaact ctttcttgaa taccggccgg ccatccacag atgcccggaa 60
gaacttccag gtacccatgg cggttgatc agggggcggc acagttggc ttgtcctgcc 120
tcgagtggcg tcgttgtccg gcttggacgg ggctccgacg gtaccggagg gcagcgacaa 180
aacacttatg cacttggggc acccgccgag acggtgcgac acccatcccg acggcacaag 240
ctcagccgcg gccgctcttg ttcttcgtcg gatcgacatt caccacttc tgaccgggct 300
tgggcgaagg aagcagaa 318

<210> 118
<211> 405
<212> DNA
<213> Mycobacterium tuberculosis

<400> 118
ggtatagtgc ctgaccggtg caggtttcga caatgtggtg ccggttcggc ggctacgtgc 60
catcgagaca ctggcgacgg ctatgcacc cgttatcggc tacgagcaaa tcgcggtatg 120
cgttcttgag catgagtcgg cgaccgtcgt catgggtcgac acccagcag gaaagacgca 180
gatcgccgtc aagcatgtgt gccgcggatt atcaggactg acctcctggc tgaccggcat 240
gtttggctgc gatgcctggc gcccgccggc cgtggctcgtg gtcggctcgg atagcgaggt 300
cagcgaattc tcgtggcagc tcgaaagggc cctgccggtg ccggtctttg cgcaaacgat 360
ggcgcagggt acggtcgcgc ggggtgcggc cctggcggcg gccca 405

<210> 119
<211> 89
<212> DNA
<213> Mycobacterium tuberculosis

<400> 119
gacactatat nataactcaag cttcaggtca atgtgcgcca agccctgacg ctggccgacc 60
aggccaccgc cgccggancc ctntctaga 89

<210> 120
<211> 354
<212> DNA
<213> Mycobacterium tuberculosis

<400> 120
ctgtagccac ctgttgccat ccccgtcatt cccgactctg gtcattctcg atccgctgac 60
accccgctaa ggctgctcct ctgggtgcat tacctcaccg acggcgaaacn cccccagctt 120
tacgactatc cggatgacgg cacctgggtt cgggctaact tcaccgtcag cttgggacggc 180
ggcgctaccg tcgatggcgc cagcggggcg atggccgggc ccggcgaccg attcgtcttc 240
ancctgtcgc gtgaacttgc cgacgtcatc gtggtcgggtg tgggcaccgt gcgcattgag 300
ggctactccg gcgtccggat ggggtgtcgtc aagcgcccgc accggcaggc ccga 354

<210> 121
<211> 379
<212> DNA
<213> Mycobacterium tuberculosis

<400> 121
atactcaagc ttcgcacgct cggcgcgcgcc ggtaccgccc aggtcgccca acagatcgtc 60
gatgttcgcy tcgtccgcct cgcgcacgtg gtctgtcacc agtcaacgtt aacgccgccc 120
cacatgtcct gcggccgggc aaaaacgtga aaaacgagcg ggcgactgcn atgtcatgac 180
accgacggcc gccgatgggc ccagggtctg gcaaattcga tctgtgcggc cagtgccagc 240
agcgtcgccct cgtcatacgg ccggccgacg agttgaaccg acatgggcag gccgtcgccg 300
tcgaagtccc acggcaccac gggcgcgggc tggccgggtc gattccaaaa ttgaaagtac 360
ggaaccgctg caccaccaa 379

<210> 122
<211> 393
<212> DNA
<213> Mycobacterium tuberculosis

<400> 122
atcgttttcga ccaggcgctc catccggcga gtggatactc ccagcaggta gcaggctcgcc 60
accacgctgg tcagtgcgcy ttacgtctgc ttgcggcgct gcagcagcca gtccgggaaa 120
tagctgccct ggcgagctt ggggatcgcy acgtcgatgg ttgcggcacg ggtgtcgaaa 180
tcaccgttgc ggtagccgtt gcgtgattg gaccgctcat cgctgcgttc gcggtagccc 240
gccccgcaca gggcgtcggc ttacgcccc atcaaggcgg cgatgaacgt cgagagcagc 300
ccgcgcagca gatccgggct cgcctgtgcy agttggtcag ccagaagctg ctccgtgtcg 360
ataagatgan aagaagtcatt tgcgttattt cct 393

<210> 123

<211> 333
<212> DNA
<213> Mycobacterium tuberculosis

<400> 123
atactcaagc ttgggtgttg ccgatcaccg gaagccgcat gatcagccac gtttcgcgcc 60
gcccggcata cggcggcgta ccgatctccg cgtcatacac ccgcgggtaa tcgccgacgg 120
tgccggttcg cgagccgaag gtgacgacgc tgattgaatc gagttccagg tccagcgggt 180
ggcgcagcaa cggcgcgagc tcaacnacgt caatcacgtt gtcgctttct acggtcaccg 240
acccggtgac cgtagtcgcc cgggtgcgctc ggccgagaag ttgcaccgcc accaccgcga 300
caacgtcttg caccggaagc ccacccccgc gat 333

<210> 124
<211> 426
<212> DNA
<213> Mycobacterium tuberculosis

<400> 124
gcgcnaacag ctgcgggcag cccacgacgt gctgcgtcgg attgccggcg gcgagatcaa 60
ttccaggcag ctcccggaac atgcggctct gctggcccgc aacgaaggac tcgaggtcac 120
cccggtgccc ggggtcgttg tgcacctgcc gatcgcacag gttggcccac aaccggccgc 180
ttgatccccg gtcggcaagc ccggcagttg ccaaaccagc cgtgatcagg ctccggtcgc 240
gagttcggcg aaaaagtggc tcgcctgac acctaccatc ggccaggatc tgcgtgtcat 300
cacgacgctc gccaaaggag ttgttgtggt gctatcgacg gccttttagc agatgttcgg 360
aatcgactat ccgatagtgt ccgcgccaat ggacttgatc gccggcggtg agctggctgc 420
cgcngt 426

<210> 125
<211> 336
<212> DNA
<213> Mycobacterium tuberculosis

<400> 125
atactcaagc tttctccgat acccgccatg tcgcgcacat ccaggacttc tgggggggatc 60
cgctgacagc ggccgggatcc caaagtgcgg atgatcgggc cgcctacgctc gtggtgtacc 120
tcgtcggttaa caacgaaacc gaagcgtatg actcgggtcca cgcggtgcgg cacatggttg 180
acaccacacc gccaccgcac ggggtgaagg cctatgtcac cggtcgggca gcactcaatg 240
ccgaccaggc cgaggccgga aacaaaagta tcgctaaggc caccgcgac acgaacatgg 300
tgatcgcagc aatgttgcta gtgatctatc gctccg 336

<210> 126
<211> 347
<212> DNA
<213> Mycobacterium tuberculosis

<400> 126
ccatgagcac cgccagccga gcacgaggcc aaactccgcc gacgcaggcc ggttggactt 60
gtcgtgctgg acaaggggtt tagccgccga agcagtgacg tacatcggcg aagagcagtt 120
cgctgtcgca ccgacggcgc aaaccgtgag gctaggggaag cgaggagcac atggccgccg 180
acccgcaatg tacacgtgc aagcaaacca tcgaaccggc atggctatac atcaccgccc 240
atcgccgcgg tcaagccggg atcgtcgat acggcgcagt actgattcac gtgcccggtg 300
aatgccgcac cccgggggagc actttccgcc aaaactaacc cggttg 347

<210> 127
<211> 315
<212> DNA
<213> Mycobacterium tuberculosis

<400> 127
cgggtgtcat tggccaccgg cggcggtgt cgggaaatg gcgggtcccc ggtggttttg 60
ctgaggagt ctgaaccgta gtcgaagtgg gcggcgtcag actccacca gccagcaggc 120
agcgcgaanc tgaatcctcc aaccgggttg tcnatccgga cagggtgggg tgcgtttggg 180
gcaatnacag gtggcgggcg tgcgttcggg tcggccggcg gaggtgctgc nttgggatcc 240
ccggctgggc attcggcntg ttggcgggcg ccggtggtgg ggggggcaac acgtgtcncc 300
ggtgcgggtg gccct 315

<210> 128
<211> 354
<212> DNA
<213> Mycobacterium tuberculosis

<400> 128
ccaagatcta caccatcgaa tacgacggcg tcgccgactt tccgcggtac ccgctcaact 60
ttgtgtcgac cctcaacgcc attgccggca cctactacgt gcaactcaac tacttcatcc 120
tgacgccgga acaanttgac gcagcggttc cgctgaccaa tacggtcggg cccacgatga 180
cccagtacta catcattcgc acggagaacc tgccgctgct agagccactg cgatcggtgc 240
cgatcggtgg ganaccact ggcgaacctg ggttcaacca aacttgaagg tgattgttaa 300
cctgggctac ggcgaccggg cctatggtta ttcgacctcg ccgcccaat gttg 354

<210> 129
<211> 360
<212> DNA
<213> Mycobacterium tuberculosis

<400> 129
agcttcccga gttcggcttt ggatcaagac cccagtcgcg gggcgcgatc cggcngctcg 60
gtgactacat caagccacaa atcgacggct ttcgggggtgc cgataccgat gacgtggcgg 120
atgtcgagt ttgagttctc ggcgggggcg atgtcacct ggcgatcacc tgctctcgt 180
tgacgatcga tcgtctatgc cgcggtctct gcgggaacag gccnccagta catcgccaca 240
gacgggatcc acccgcatth cggctacggt tgctcgtttc ggtgttcgga ctagtcggtc 300
ctggtgacgt gccggtgatg cggaccggtc ctagcactga ccaatggcca aaatgcgggc 360

<210> 130
<211> 483
<212> DNA
<213> Mycobacterium tuberculosis

<400> 130
cggggggcct cttaatagt taggaaagaa gctctacata ttcaggagga ttcaccatgg 60
ctcgtgcggg cgggatcgac ctcgggacca ccaactccgt cgtctcggtt ctggaagggtg 120
gcgaccgggt cgtcgtcgcc aactccgagg gctccaggac caccocgtca attgtcgcgt 180
tcgcccgcga cggtgaggtg ctggtctgcc agcccgcga gaaccaggca gtgaccaacg 240
tcgatcgac cgtgcgctcg gtcaagcgac acatgggcag cgactggtcc atagagattg 300
acggcaagaa atacaccgcg ccggagatca gcgccgcgt tctgatgaag ctgaagcgcg 360
acgccagggc ctacctcggt gaggacatta ccgacgcggt tatcacgacg cccgcctact 420
tcaatgacgc ccagcgtcag gccaccaagg acccggccag atcgccggtc tcacgtgctg 480
cgg 483

<210> 131
<211> 423
<212> DNA
<213> Mycobacterium tuberculosis

<400> 131
ataactcaagc ttcataacag gcctgtttgtg ggcgaccccg gctcgccgag ttctgcacgc 60
accgcctcaa gtgcgggccc caccgcgggc atctcccggc cagcgagggc cgcgggcccgc 120
gccgcagcga cggcgtgttc gcgcagttcg ccgtcaatga tgctgacctg atcgccacc 180
cgggcgtttct cggcgtcttc gcgttcaacta atcgcggtgc tcagcagcgt ctcgacagcc 240
accacccgag tggcgaccag ctgctccacc acggaccgca gcgatgccgt cacctcacc 300
gtccagcggg ccaccacgac acggtcgtgc accagcgcgc gggcattcac caccagggcg 360
gtcaccgcca ggccgatcgc cacaccgcgc accatccccg atgcagccag gccgggagta 420
aga 423

<210> 132
<211> 338
<212> DNA
<213> Mycobacterium tuberculosis

<400> 132
ctggtgctgg acggagccta gtacaacttc ctctccaatg ctcttgcccc gatcgcgggcg 60
accaggatga cccaggacat cctgccgccc gaagtactgg aaaagctcac acccgagttc 120
gtcgcacccg tgggtggccta cctgtgcacc gaggagtgtg ccgacaaccc atcggtgtac 180
gtcgtcagtg gtggttaggt gcagcgagtt gcgctgtttg gcaacgacgg cgccaacttc 240
gacaaaccgc cgtcngtaca agatgtttgcg gcgcggtggg ccgagatcnc cgatctgtcc 300
ggtgcgaaaa ttgctggatt caagttgtag aactaaat 338

<210> 133
<211> 173
<212> DNA
<213> Mycobacterium tuberculosis

<400> 133
ataactcaagc ttttccggcg tcgtccacct gacccaaaaa gcgcaggtgc gccgccaac 60
ggcccgcctg gccgcgcaac tggtcggcgt cgccgtggcc gacaatcagt agctggacat 120
ccggaaaccg ctgcaccacc ttcggcagcg cgtcaagcaa aaacggccat tcc 173

<210> 134
<211> 255
<212> DNA
<213> Mycobacterium tuberculosis

<400> 134
tttcagatct ctttttatg acatgactgg agatctgtct agattgcagc tcctgtgagc 60
gtgggtaccg gattcaagcc ggtcggtcac gccgcggtgg taccggcttt gcggcagtc 120
tcggcctcga gttcggcgat cgcgcgcgaa gtgcgtttcg cgcaccaaga tcgcggccta 180
atggccggcg atgaccgca tgaccagcgc gatccaggaa aaaccgttcc aaccagtgc 240
gggcggccat ccccg 255

<210> 135

<211> 285
<212> DNA
<213> Mycobacterium tuberculosis

<400> 135
atactcaagc ttcccgacca caagttgaac agcaccgatt tcggcgagca cttcgtcaac 60
ttccagggtg cccgcaccaa gtatttcgac aagtatttcc gtcgggccgc cgccgccggc 120
gcgcggcagg tggatcatcct ggccggcggg ctggactccc gcgcgtaccg gctgccttgg 180
cccgaacgga ccacggtttt tgagctggac cgcccgagg tccttgattt caagcgcgag 240
gtgctcgcca gccacggtgc ccaaccgcgc gccctgcgcc cgca 285

<210> 136
<211> 494
<212> DNA
<213> Mycobacterium tuberculosis

<400> 136
gtgtgctgtc aattcagagc tgagcctgat gcactcaact tactgagcat gctaacgctg 60
gtcgtgcggg tcttgttccc gcgtgtcggc agggcacacg ctcggggcgt agctgggaga 120
ggccccggtc aagcccgag agcagtgtc agtccgccag cttgaccgac tttcgatgag 180
aacgcgttc tcgccgtatt gaactggcgt gctgacggtc gctgagcagc gctcgccgag 240
tgccggccgt gattctttca tcgagccagg aggcgcattc gtgttcggcc gcctgcgggt 300
cggcccatc gtcgacgcga tccgtcacc actcctcgat caggctctgc tcatcgaacg 360
ggccaacggt gctgtcggag tatgtgtgcg tgggcacggc gagccgggtg ctgtggtaca 420
cccaccgttg catgaccaag ttgacgcctg actggctgag caccgcgatc cgctcacagg 480
tcggaacgtt ggtg 494

<210> 137
<211> 357
<212> DNA
<213> Mycobacterium tuberculosis

<400> 137
atactcaagc ttttgggtcta gccggccgag cccgatacag gtgtcatttg ccaccggcgg 60
cggctgtccg ggaaatggcg ggtccccggt ggttttgcgt aggagtgcgt aaccgtatgc 120
gaagtgggcg gcgtcagact ccaccagcc agcaggcagc gcgaaactga atcctccaac 180
cgggttgtcg atccggacag gttgggggtgc gtttggggca atgacagggt gcggcgggtc 240
gtccgggtcg gccggcggaa gtgctgcgtt gggatcgccc ggctgggcat tctgcgtgtt 300
ggcggcggcc ggtggtgggg gggcaacagg tgtctccggt gcgggtggcg ctgcacc 357

<210> 138
<211> 458
<212> DNA
<213> Mycobacterium tuberculosis

<400> 138
ggggccactc cgcacaatct gtacccgacc aagatctaca ccatcgaata cgacggcgtc 60
gccgactttc cgcggtaccc gctcaacttt gtgtcgaccc tcaacgccat tgccggcacc 120
tactacgtgc actccaacta cttcatcctg acgccggaac aaattgacgc agcggttccg 180
ctgaccaata cggtcgggtcc cagcatgacc cagtactaca tcattcgac ggagaacctg 240
ccgctgctag agccactgcg atcggtgccg atcgtgggga acccactggc gaacctggtt 300
caaccaaact tgaaggatgat tgtaaactg ggctacggcg acccggccta tggttattcg 360
acctcgccgc ccaatgttgc gactccgttc ggggtgttcc cagaggtcag cccggtcgtc 420
atcgccgacg ctctcgtcgc cgggacccag cacggaat 458

<210> 139
<211> 595
<212> DNA
<213> Mycobacterium tuberculosis

<400> 139
ttctntcttc ccnnattcgt nnntctenta ctaccngggc cncaaaacac cttggcnaac 60
gctcaaaggc gntacnggca ccaaggcccc acacgtcacc ctgtgacctc ctgcgccgac 120
cccgcccgag gtccctggccg ttaccactga acgggcgagc cgggagtctg gtacgcatcg 180
aacaaagagc aaggtgcatg ggcggagttg ttccgccnct ttttttatga cggggtcgat 240
ccattcgagg tccgtcgccg cgtcgggtcg gtggcggtca cactccaggt actcgacctc 300
ncagacgaga ggactcgatc ccatctangt gtggacnaaa cagatcttct gtccgacgac 360
tacacaccac ccaggccatc gccgcggccc gcgatgccaa cttcnacncc gtnctggccc 420
cggcgggcggc gctccccggt tgtcaaacac ctgccgtgtt cgttcacnca ctgcccaaca 480
tcnagcccga ncnatccnag gtccgtccaa cgctcccgcg gctcnccaac ctntcccnc 540
tgatntccg caccaaacac atgcccgaact centgcncn attgcttga tccct 595

<210> 140
<211> 434
<212> DNA
<213> Mycobacterium tuberculosis

<400> 140
ccgctatcgg tcggtgtgct tggcgggcgtc ggtatcaaca ccgcccacga aatggggcac 60
aagaaggatt cgctggagcg gtggctgtcc aagatcacc tcgcccagac ctgctacggg 120
cacttctaca tcgagcacia ccgtggccat cagctccggg tgtccacacc ggaggaccgg 180
gcgtcggcgc ggttcggcga gacgttgtgg gagttcctgc cccgcagtgt tatcggcggc 240
ttgcgtcggc ccgttcattt ggaggcccaa cggtcgcgtc ggctcggcgt cagccccctg 300
aatcccatga cgtatctgcg caacgacgtg ctcaacgcgt ggctgatgtc ggtggtgttg 360
tggggtgggc tgatcgcggt ctccggcccg gcgctgatcc cgttcgtcat catccaggca 420
gtcttcggct tcag 434

<210> 141
<211> 321
<212> DNA
<213> Mycobacterium tuberculosis

<400> 141
atactcatgc ttgccgaagt tccgatgggt cgcgccggcg ancccagcga agtcgctagc 60
gtggccgtgt tcttggttcc ggatctatcc tcgtacatga ccggcaccgt gttggacgtg 120
actggcggcc ggttcatatg acaccgagat cattgccacg gtacggcaat tcgtcaagaa 180
ggaaatcttt cccaatgcac cggccctcga acgtggcaac agctaccgcg aagaaatcgt 240
cgatcggctg ggtgttattg gcttgctcgg tcgcccggctg caagggtatc gacaccaccg 300
agttcattct ccgggcgtgc c 321

<210> 142
<211> 348
<212> DNA
<213> Mycobacterium tuberculosis

<400> 142
ggcgtcaacg gtgtcggcac cggcgtcctg cagttggtag gcctgcagtt tgtgcatcag 60


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gccgatgccg cggccctcgt ggccacgcat gtacagcacc acgccgcgcc cctcacgggc 120
gaccatcgcc agcgcggcgt ccagctgagg cccgcaatcg cagcggcgtg acccaaacac 180
atcgccggtc aagcactccg aatgcacccg gaccagcacg tcgtcacctg cggcggtggg 240
cccggcgatc tcgccgcgga ccagcgcgac atgttccacg tcctcgtaga tgctggtgta 300
gccgatggcg cgaatctccc atgacgagtc ggaatccgcg ctcggcg 348

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<210> 143
 <211> 339
 <212> DNA
 <213> *Mycobacterium tuberculosis*

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<400> 143
atactcaagc ttccggcctcg ctgcaggagt gggagccgca gggctggaaa tccgaaaaac 60
gagccgggtga tcgcactgtc gccgatcggg gccgcacctg gttggtgtta ccgatgaatc 120
cgcacccaaa atgtggctgc ggtggcgttt cttgactcct tggcgtcgac tcttgtggca 180
gccaccgagc gggttggtcca ggatctggat gggcaaagtt gtgcggcccg gccggtgacg 240
gccgatgagc tgaccgaggt cgacagcgcc gtgttggtcg acttggaacc gacatggatt 300
cgccccggtt ggcgtcacct caagcatttc aatggttat 339

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<210> 144
 <211> 269
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 144
atgcgtcacc ccgatgcgcc cagatcgggg cttcgcaa ataaagcacgaa caggcgggca 60
aaacgtctat ctccggagccg gaagggcaat cagccgaccg tcgacgaacg acaccggcga 120
taaccactta ggcgttgaac ggccggccca aacattacgc ctccgttgat aaggctttcg 180
gtctcttccc cggtcattccc aagcaccttg cggcaaattt gaacgcttcc ctgtccgggc 240
accggccccc ggctttgggg tccntccga 269

```

<210> 145
 <211> 285
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 145
atactcaagc ttcaatcgcg ccgccacaat ccaaatatgc gtctagcgtc tcgatgagcg 60
tcggtccggc atcggctagg ggccgcatca cgtcggtagt cagggccacg atcgcccaag 120
gcgtcgccca tcaagggcgc gttcggggcaa aaattcccct atccagcacg ggccgcggcg 180
ctccgcncca gccggcgacg gcgttcatcc cggagatcgc ctcgctagcg ctgcggtgcg 240
ccgcggtcag catgggcgcc gtggggccga tgaccaccgg ggcgt 285

```

<210> 146
 <211> 75
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 146
ttcggcgggt ctgtagattg cggtcggcca cccacaggc actcatgaac cgcagccac 60
gatcgatctc ggtgg 75

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<210> 147
<211> 164
<212> DNA
<213> Mycobacterium tuberculosis

<400> 147
gcgcaccatc gccagtaggt gcccgtaggc gggcgcgctc agccacccga gcggaaacgc 60
gagtcggaac agcaacagca ggacggggcg aaccagggcg gtgaccatgc ccccggcgct 120
gaacatcaac cacaggaagg gtcgcgcga gcgtccgcgc gacc 164

<210> 148
<211> 228
<212> DNA
<213> Mycobacterium tuberculosis

<400> 148
catcgtcgaa cttcggtccg ggttgntagn accgcagcac caaacgcacc caccgacccc 60
cacgcttcac gccaacccct tagttcattg gcgtgaacag cagcgtagcc gggtgccccg 120
atatatgtgg aaaaatcggt cggacgtaca aaaaaagttc ctgacgctgg cgtcaactcg 180
aaactgcctc ggaagtcaat gatgatccat cagtcaatat taaagtcg 228

<210> 149
<211> 238
<212> DNA
<213> Mycobacterium tuberculosis

<400> 149
atactcaagc ttgtctgctg cctcagcgta tgcattcaac agcgcatcgc gatcaacgat 60
caggcgcgcc gatttcgggc cgcgggcagt ggactggcc agatggccgt ttttttcgag 120
aaacttcaac gcctgagcgc tgcttcccat cgagagaccg gtggcctcta caaccgatgc 180
gacagttgga ccggcgatgt tcgccagcag cgcttcacat acggcaagtn tggcgcg 238

<210> 150
<211> 162
<212> DNA
<213> Mycobacterium tuberculosis

<400> 150
ttgtccaggc ggggaatcgg gcagggagac gacaccttcg ttcggttcga tcgtcgcgaa 60
cgggtagttg gccgcgacca cgttgtttcg ggtagcgcg ttgaaaagtg tcgacttgcc 120
gacgttgggc aggccacga tcccaggct caagtcaca ga 162

<210> 151
<211> 377
<212> DNA
<213> Mycobacterium tuberculosis

<400> 151
atactcatgc ttggcgctg ggtggcagcc cacctgccca ccacacggac cgcggtgcgg 60
acgcggctga cgcgcctggg ggtcagcatc gtggccggtc tgctgttgta tgccaacttc 120
ccgcgcgcga actgctggtg ggccggcggtg gttgcgctcg cattgctggc ctgggtgctg 180
accnccgcn cnacaacacc ggtgggtggg ctgggctacg gcctgctatt cggcctggtg 240
ttctacgtct cgttgttgcc gtggatcgcc gagctggtgg gcccggggcc ctgggttgga 300

ctggcgacga cgtncgcgct gttccccgga atcttcggtc tgttcgccgt cgtgggtaccc 360
tggttgccggg ttggccc 377

<210> 152
<211> 308
<212> DNA
<213> Mycobacterium tuberculosis

<400> 152
cgccaattca cgatatcggt aaccgatata ccgagccgat agctggcggg ctccgggtggt 60
ggccagcggc gctgcgacga aaggtgtgac cgtcatgaaa cagacaccac cggcggccgt 120
cggccgtcgt cacctgctcg agatctcagc atccgcagcc ggtgtgatcg cgctttcggc 180
gtgtagtggg tcgccgcccg accccggcaa aggccggccc gacacaaccc cggaacagga 240
agtcccggtc accgcgcccg aagnacttga tgcgcgaacn cggagtgtct caaacgcctc 300
ctgctgat 308

<210> 153
<211> 377
<212> DNA
<213> Mycobacterium tuberculosis

<400> 153
atactcaagc ttgggcactg acttcgggtac cccctccgcc tttggccagc agcagccaca 60
gcgcggttcg cggaccgaac gtggacatca atagcccgga atcgggtgtgt gcaagttggt 120
aaacggtggt gatcccaagc tttgccagcc ttttcgtagt cttgggcccc acacccaca 180
gtgcttcgac ggtacggtca cccatgatgg ccatccagtt ggcacgggtg agctgataaa 240
tgccagctgg tttcgccaac ccggtagcga tcttggcgcg ctgcttggtg tcaactgatac 300
ctatcgagca agacagcccg gtttgcgaca aaatgacttt tcggatctct tcggcgactt 360
cgatggggtc gtcggga 377

<210> 154
<211> 259
<212> DNA
<213> Mycobacterium tuberculosis

<400> 154
aaagtctctgt gccggttcgc taaacacccg gcggacactc agacggtgct ggtggtgctg 60
catggcaccg cgggcagcaa agcgcacttc tccgggggac gacagcaagc gaccgctaga 120
caagaggggt cgtgcgcagg cagaaacgtt ggtacacagc tgctggcggt cggcgccacc 180
gatgtttatg ccgccgaccg ggtgcgctgc caccagacga tggagccact cgccgcggaa 240
ctgaacgtga ccatacaca 259

<210> 155
<211> 372
<212> DNA
<213> Mycobacterium tuberculosis

<400> 155
atactcaagc ttgggttcca cgcccgcgca gccacgccgt cacctttcca cgagacctca 60
cctgccgata cgaaatggaa tcggccgtga cggaattggc gcaccgaaca cccaacgagg 120
tggtggcttc gtcgcgaacc gtcacccgag tcgcggccac cgtgcgcacg gcgacgttct 180
acaccgcac caagatccga aagctgcaag ctcacgacac cgatcccagc gtcatacccg 240
ctgccgcccg gcacgtcctt gacctattcg agctggatcg gcccgctccg ttgctgggag 300

tgcggttaga actggcctag aaccggcggg cacaccgcnc ctgggcgggg cgaattcttg 360
accgcncgg cc 372

<210> 156
<211> 290
<212> DNA
<213> Mycobacterium tuberculosis

<400> 156
cgcggttggc gtagttggac gggtcgcctt ccgaggccaa tgatgacgat gaccacgccg 60
atcacgatgg ccaccgagag ggacaacaac agaaagctga cgaatccctc cttggcgggc 120
ggggctttgt ggtcgccggg cgcgatgggc gcgaatttac ggcccgtcc cccaggccgc 180
cgcgaagcag ggtccccagc cagttggcgt aggcggaatt aacgatcagc gccaccgcga 240
taacctgcc a tgcctcgggc atatcgatgt gcggccagaa caggccgaac 290

<210> 157
<211> 470
<212> DNA
<213> Mycobacterium tuberculosis

<400> 157
ccaacaagag catcgggaca tacggagtca actaccggc caacgggtgat ttcttggccg 60
ccgctgacgg cgcgaacgac gccagcgacc acattcagca gatggccagc gcgtgccggg 120
ccacgaggtt ggtgctcggc ggctactccc aggggtgcggc cgtgatcgac atcgtcaccg 180
ccgcaccact gcccggcctc gggttcacgc agccgttgcc gcccgagcg gacgatcaca 240
tcgcgcgat cgccctgttc gggaatccct cgggcgcgcg tggcgggctg atgagcgccc 300
tgaccctca attcgggtcc aagaccatca ncctctgcaa caacggcgac ccgatttgtt 360
cngacggcaa ccggtggcga gcgcacctag gctacgtgcc cgggatgacc aaccaggcgg 420
cgcgtttcgt cgcgagcagg atctaaccgc gagccgccca tagattcccg 470

<210> 158
<211> 434
<212> DNA
<213> Mycobacterium tuberculosis

<400> 158
taanaccgt gtaatttggg atgggcaaaa aggccaagca ccgcgtggcc acgaacgccg 60
ggagggacaa tctcgggagg ctagggcttc tcgcgggaag gccgaacgt acggcgtttc 120
aacacgtcgc gtcnccctcc gaccgcgaac attcggggat ggcagcaacc tggtagcncc 180
ctggccggggc gatgatctgc agcgtcgccg cgggtagtgc ccgccggggc ggctacagtc 240
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gatatgttcg cctcgctgcg ccggtggacc ggtgggtcta tcccggagac cgaantcccg 360
atcgaagcga ccgtctcctc gatggacgcc ggcggcgtca ccctgggttt gctcaccgcc 420
tggcgtggcc ccaa 434

<210> 159
<211> 363
<212> DNA
<213> Mycobacterium tuberculosis

<400> 159
gtccgcaaaa gactcagcgg ccgactttgc tcgcagctgg cggtagccgc ccaccgattc 60
gatgccgtgg tcgcggaaga atgcctccc aaatcgcac gccgactcca gttcggcgag 120

catccgcgat	gccagctgcg	gotgogcoct	gccggccacg	gcacccacat	gcggcagttc	180
gtccacctgg	gccagcgccc	cgccgcgcaa	gtccaaacaa	tagaactgca	cccggccccg	240
atcgtgggta	gcagccaacg	ccatgatcag	cgtccgcagc	gcggttgact	tgcccgtttg	300
cggtgcacct	acgaccgcga	cattgcctgc	ggccccggac	aagtcgatcg	tcagcggcac	360
ccn						363

<210> 160
 <211> 301
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 160						
cgtggccacg	aacgccggga	gggacantct	cgggcggtta	gggcttctcg	cggggaaggcc	60
cgaacgtacg	gcgtttcaac	acgtcgcgtc	gccctccgac	cgcgaaacatt	cggggatggc	120
agcaacctgg	cagctacctg	gccggggcga	gatctgcagc	gtcgccgcgg	gtagtcgccg	180
cccggggcgg	tacagtctga	aacgcgatga	ccatcgatgt	gtggatgcat	catccgacgc	240
aacggttcct	acacggcgat	atgttcncct	cgctgcgcgg	gtggaccggt	gggtctatcc	300
c						301

<210> 161
 <211> 436
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 161						
atactcaagc	tttgcgggcg	gcgcggaaat	gtgaacgcac	caaaccgcgc	cgctgcgggt	60
cggcggggcca	ctcgacctcg	aattttcgcc	ccgtgaccat	ccagcccgcg	ggcagttggg	120
caccggggccc	cccggtcgcg	gcataactgt	tggcgctgcc	gtcataaagc	tcgaacagca	180
ccgaaaccga	ctccaccacc	ggccgggtgc	cctcaaaatc	cacgccgatc	tccacatacc	240
gggaaaacgt	cggtgtccca	tcgggtttcg	gcttgccccg	cagctgcaca	ccaccgggtg	300
cctcgggccac	cttcgcggcc	tgagcgcagc	taencatcct	gacgatcadc	accccgcccc	360
cggtcacgc	ttggcctccg	tgaccgcacg	catcgcccgg	ttgcgcgcac	cgcgacgccc	420
gtacagccgc	gcgcac					436

<210> 162
 <211> 390
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 162						
agcttgccgg	gactgcggaa	cagaagcggc	ggttcctacc	gcgggtgtgc	gccggcgcgga	60
tatcggcctt	tttactaacc	gaacccgatg	tgggctccga	tccggcgcg	atggcatcga	120
cggcgacgcc	gatcgatgac	ggccaggcct	acgagcttga	gggtgtgaag	ttgtggacca	180
ccaacggtgt	ggtagcggac	ctgctagtgg	ttatggcgcg	ggtaccgcgc	agtgaagggc	240
accgaggggg	aatcagcgcc	tttgtcgtcg	aggctgattc	gcccgggatc	accgtggagc	300
ggcgcaacaa	gttcatggga	ctgcgtggca	tcnaaaacgg	cgtgaccggg	cttcacgcgc	360
tcnggggtgc	caaagacaac	ttgatcggca				390

<210> 163
 <211> 75
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 163
ctcaagcttg gcgatgcggg ctggccaaaa ctggccgggc gggggttggc ttgttcaatc 60
aagggtgggt tgccg 75

<210> 164
<211> 110
<212> DNA
<213> Mycobacterium tuberculosis

<400> 164
ccgaaggccc gttcccgggc gttcagcaag cgatcgtcgg ttggcccact gcgggtcgaa 60
tcttgccggc gcgccggctg tggaacgccc aggtcaccgc gcggcgtacc 110

<210> 165
<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

<400> 165
atactcaagc ttttttctgc tcatgaaggt tagatgcctg ctgcttaagt aattcctctt 60
tatctgtaaa ggctttttga agtgcacac ctgaccgggc aaatagttca ccggggtgag 120
aaaaaagagc aacaactgat ttaggcaatt tggcgggtgtt gatacagcgg gtaataatct 180
tacgtgaaat attttccgca tcagccagcg cagaaatatt tccagcaaat tcattctgca 240
atcggcttgc ataacgctga ccacgttcat aagcacttgt tgggcgataa tcgttaccca 300
atctggataa tgcagccatc tgctcatcat ccagctcgcc aaccagaaca cgataatcac 360
tttcggtaag tgcagcagct ttacgacggc gactcccatc ggcaatttct atgacaccag 420
atactcttgc accgaacgcc ggtgtctgtt gacca 455

<210> 166
<211> 309
<212> DNA
<213> Mycobacterium tuberculosis

<400> 166
ctcaagcttg gtgccgacat ggccgggctg gagcccgct atggcaaggt tccgctcaat 60
gtggttgtga tgcagcagga ctacgttcgc ctcaatcagc tcaaacgtca ccccggtggc 120
gtgctgcgca gcatgaaggt cggcgccgc acgatgtggg cgaaggcaac aggtaaaaac 180
ctggtcggca tgggtcgagc cctcattggg ccgttgcgga tcgggttgca ccgcgcggga 240
gtgccggctg aactcaacac cgccttcacc gatcttttcg tcaaaaatgg cgtcgtgtcc 300
ggggtatac 309

<210> 167
<211> 232
<212> DNA
<213> Mycobacterium tuberculosis

<400> 167
ccgaagcgtg ggaaatcctg accgaatacc gcgacgtgct ggacactttg gccggcgagc 60
tgctggaaaa ggagaccctg caccgaccgc agctggaaag catcttcgct gacgtctaaa 120
agcggccgcg gctcaccatg ttgcagcact tcggtggccg gatcccgctg gacaaaccgc 180
ccatcaagac acccggggga gatcgcgatc gaaacgcggc gaaacttggg cc 232

<210> 168
<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

<400> 168
cgactcgaca agcattcttg acagttgttt tggctcggca tggttagcca aggttctgcg 60
gtcccaccag atcatcttgg tccggtagcg ctgcgtccgg tatgctgccg ccgggattct 120
cgctgctatt actcccccg aaaaacgcca ccggtccagc gcgtgggccc ccgcgggtccc 180
catcacaac tgaaccccc acaggggaca tgcttagcgg tagggcgcg gccaaaggcgg 240
cagcaatcgc atcactgcgc tgcgcgtcac tattaacca cccggacttc acttccacga 300
ccccgaatgg cgcccgggtca ttgatcatct tgcgcaccgc ggataatccg ggattgccag 360
cccattcgac taccgcatgc gattcatcgg ctgaccgcag cggtcggatt acccgagcgc 420
cccgantaca tctcctccaa tatcaatggg cgcaa 455

<210> 169
<211> 428
<212> DNA
<213> Mycobacterium tuberculosis

<400> 169
gcggtntagc ttcccgctcg accggcgacc gccagccgag aagctcgttt tcccagtggt 60
gctggggatt ctacagctgc tgcctgagtc gtgccagacc gcttccgctt cgggttataa 120
cgagccgcgg ggctacgac gtgcgacgct gaagttggtg ttctccatgg acttggggat 180
gtgcctgaac cggttcacct acgactccaa gctggcgccg tctcgtccgc aggtcgttgc 240
ttgcgatagc cgggaggccc ggatccgcaa tgacggattc catgccaacg ctccgagttg 300
catgcggtac gactacgaat tgatcaccca gaaccatcgg gcgtattact gcctgaagta 360
cctggtgcgg gtcggatact gctatccggc ggtgacgacc cccggcaagc cgccatccgt 420
gctgctgt 428

<210> 170
<211> 385
<212> DNA
<213> Mycobacterium tuberculosis

<400> 170
ctcaagcttg ggcgtgacgg ccaccggggc cactccgcac aatctgtacc cgaccaagat 60
ctacaccatc gaatacgacg gcgtcgccga ctttcgcggg taccgctca actttgtgtc 120
gacctcaac gccattgccg gcacctacta cgtgcactcc aactacttca tcctgacgcc 180
ggaacaaatt gacgcagcgg ttccgctgac caatacggtc ggtcccacga tgaccagta 240
ctacatcatt cgcacggaga acctgccgct gctaaagcca ctgcgatcgg tgccgatcgt 300
ggggaaccca ctggcgaacc tggttcaacc aaacttgaag gtgattgtta acctgggcta 360
cggcgacccg gcctatgggt attcc 385

<210> 171
<211> 318
<212> DNA
<213> Mycobacterium tuberculosis

<400> 171
cgggtgtcat tggccaccgg cggcggtgtt ccgggaaatg gcgggtcccc ggtgggtttg 60
ctgaggagtg ctgaaccgta gtgaagtgg gggcgctcag actccacca gccagcaggc 120
agcgcgaagc tgaatcctcc aaccgggttg tgcgtccgga caggttgggg tgcgtttggg 180
gcaatgacag gtggcgggcg tgcgttcggg tcggccggcg gaggtgctgc gttgggatcg 240

cccggctggg cattcggcgt gttggcggcg gccgggtggtg ggggggcaac angtgtcgcc 300
ggtgcgggtg gcgctgca 318

<210> 172
<211> 443
<212> DNA
<213> Mycobacterium tuberculosis

<400> 172
ncttgatatt ggcgtcaacg gtgtcggcac cggcgtcctg cagttggtag gcctgcagtt 60
tgtgcatcag gccgatgccg cggccctcgt ggccacgcat gtacagcacc acgccgcgcc 120
cctcacgggc gaccatcgcc agcgcggcgt ccagctgagg cccgcaatcg cagcggcgtg 180
acccaaacac atcgccggtc aagcactccg aatgcacccg gaccagcacg tcgtcaccgt 240
cggcgttggg cccggcgatc tcgccgcgga ccagcgcgac atgttcacg tcctcgtaga 300
tgctggtgta gccgatggcg cgaaactccc catgacgagt cggaatccgc gcctcggcga 360
cccgtcaat gtgcttctcg tgcttgccgc gccattcgat caagtcagca atggtgatca 420
gcgccagacc gtgctcntcg gcg 443

<210> 173
<211> 420
<212> DNA
<213> Mycobacterium tuberculosis

<400> 173
cataagggcc ggcgtaccgc gtaccggccg cgggcctacc acgtgccgga actggaagcg 60
cagtaagccc tcaacgcgcc accgcttttg cccgcgcgcc cggcgtaggc gcatcggcgg 120
tgcccggtgg ggcgcgcaact gcgacctcac cagcggcttt cgagctttgt tcgatcaacc 180
ggccagcatg gtcgaggatg cattcgagac catattcgaa attggtttca tcgggggccc 240
cgatccgatg ccccttccca gttgcgtgag caagcagcgg agtcgtcgcg ggatcgatgg 300
ccacgggggtg ttcaatggcg gatggtccgc tgcccgcgga ctggctcttg cgggagagcc 360
gatctagcac caccgatccg cgcacgtgga ccgaaaccgc cgagtagatg tcgaaagcgt 420

<210> 174
<211> 336
<212> DNA
<213> Mycobacterium tuberculosis

<400> 174
cgtccttttc cccaagatag aaaggcagga gagtgtcttc tgcataaata tgaagatctg 60
gtacccatcc gtgatacatt gaggtgttcc cctgggggtc gttaccttcc acnagcaaaa 120
cacgtagccc cttcagagcc nnatcctgag caanatgaac agaaactgag gttttgtaaa 180
cgccaccttt atgggcagca acccggatca ccggtggaaa tacgtcttca gcacgtcgca 240
atcgcgatcc aaacacatca cgcataatgat taatttggtc aattgtataa ccaacacgtt 300
gtcaaccgc tcctcgaatt tccatatccg ggtgcg 336

<210> 175
<211> 264
<212> DNA
<213> Mycobacterium tuberculosis

<400> 175
ctcaagcttc atgtccgtac ggctcgggta cgcttccgtc gcagtgtgcg agtgataaat 60
gacgaccggg acctcgtcgg catcttccat agcccgccac accttcagtt gctcaccgga 120


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atccaaccgg tagaagggtcg gcgagcgctc ggcattggtc atcgggatat gccgctcggg 180
acggtcagag ccctcgggtc cggccagcac tccgcaggct tcgtcggggg ggtcgcgcaca 240
cgcatggggc accatcgcat tcac                                     264

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<210> 176
<211> 325
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 176
ncgccgccag ccaccacgcg cgggtcgggc gccggggccc gcccgccagg ctgctccgct 60
cggatgatggc acgccaccgc gacaccaccc ggctgcgcta cgtcgagcca taccggggcg 120
agctacatcg gctcggccgc ccagtgttcg ggccctcttt cgaggtcgag gtcgataccg 180
atttgcgcat ccgcagccgc accctggacg acagaaccgt gccctacgan tgcttgtcgg 240
gcggggccaa agaacagctt ggcatcctgg cgcgattggc cggcgcgggc ctggtctcca 300
aagaagacgc cttccggtg ctgat                                     325

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<210> 177
<211> 243
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 177
cgccacgttc atgggcaaca accccgatca ccggtggaaa tacgtcttca gcacgtcgca 60
atcgcgatcc aaacacatca cgcataatgat taattcgctc aattgtataa ccaacacgtt 120
gctcaacccg tcctcgaatt tccatatccg ggtgcggtag tcgccctgct ttctcggcat 180
ctctgatagc ctgagaagaa accccaacta aatccgctgc ttncctatt ctccagcgcc 240
ggg                                     243

```

```

<210> 178
<211> 430
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 178
atactcaagc ttcaaccgat tgaagcattg tgcgaaactga cggcgcccgcc gcatggccaa 60
tccggaagac catcattggc cagtggccgg gcgctaacag gttccagccc cccaccagtg 120
ccgctcgaac atgcggtgca acccattcgc aggcgggcag ggaaagcacc gcggaagccg 180
caaagggctg cagttccgcg cccaatagtg tcgtccgcaa ccagatgcgc tcgaaaaccg 240
cgccggcagt cagcgcaccc gacgcgaggt cgagagacgt cgtcagcgcg cccacatggg 300
gtgccaatcg gcacggcagg taggcgcgcg gcaacccgaa cgcgtggtgc atgccacagg 360
tccgcaggag gcgcagcacc cgccaatgcc gaagcccacg aaacatcggg cgcattccag 420
cttcaacctc                                     430

```

```

<210> 179
<211> 448
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 179
agcttttggc aggggtctcct tcgaattcgg cgtgcaccgc tatggggttg agcagcggct 60
ggcgccgcac accccaactg ccggggtgtt ttgcgccgca acccgatca tggtagcgca 120
aaaggagatt cgctgttcg atgctgggat tcgccaccgc gaggccatcg accgattact 180

```

cgccaccggg	gtgcgagagg	tgccgcagtc	ccgctccgtc	gacgtctccg	acgatccatc	240
cggtctccgc	cgtcgggttg	cggtagccgt	cgatgaaatc	gctgccggcc	gctaccacaa	300
ggtgattctg	tcccgtttgt	togaagtgcc	tttcgcgata	gactttccgt	tgacctaccg	360
gctggggcgt	cggcacaaca	ccccggtgag	gtcgtttttg	ttgcagttgg	gcggaatccg	420
tgctctgggt	tacagcccga	atcgtcac				448

<210> 180
 <211> 380
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 180						
atactcaagc	tttgtcacac	caactgtttc	caccaggcgc	tccatccggc	gagtggatac	60
tcccagcagg	tagcaggtcg	ccaccacgct	ggtcagtgcg	cgttcagctc	gcttgccggc	120
ctgcagcagc	cagtcgggga	aatagctgcc	ctggcgagcg	ttggggatcg	cgacttctat	180
ggttgccgca	cggtgtgcga	aatcacgggt	gcggtagccg	ttgcgctgat	tggaaccgtc	240
atcgctgcgt	tcgcggtagc	ccgccccgca	cagggcgctc	gcttcagccc	ccatcaaggc	300
ggcgatgaac	gtcgagagca	gcccgcgcag	cagatccggg	ctcgccctgt	cgagttggtc	360
agccagaacc	tgctcgggtg					380

<210> 181
 <211> 532
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 181						
ccttaagccc	cgcaggggcc	ggcacgcgcg	gtaccgccc	ggtcgcccaa	cagatcgctc	60
atgttcgcgt	cgtccgcctc	gogcacgtgg	tctgtcacca	gtcaacgtta	acgccgcgcg	120
acatgtcctg	cggccgggca	aaaacgtgaa	aaacgagcgg	gcgactgcaa	tgtcatgaca	180
ccgacggccg	ccgatgggcc	cagggtctgg	cagattcgat	ctgtgcggcc	agtgccagca	240
gcgtcgccct	gtcatacggc	cggccgacga	gttgaaccga	catgggcagg	ccgtcgccgt	300
cgaagtccca	ggcaccacg	gocgcgggct	ggccggtcag	attccagact	tgaaagtacg	360
gaaccgcgtg	caccaccagc	agcaacgtcg	aaactgcacc	ccggcgcttg	taggcgcgca	420
tgcgggacgg	gcccgtcgcg	gcgcctggcg	tcacaactac	gtcgacatcg	tcgaagatcg	480
actggatcgg	ctgctcacac	cactcggcgg	ccgcaggccg	ccatccgcgc	tc	532

<210> 182
 <211> 477
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 182						
agctttttga	gcgtcgcgcg	gggcagcttc	gccggcaatt	ctactagcga	gaagtctggc	60
ccgatacggg	tctgaccgaa	gtcgtcgcg	tgcagcccac	cctcattggc	gatggcgccg	120
acgatggcgc	ctggaccgat	cttgtgcgc	ttgccgacgg	cgacgcgggt	ggtggtcaag	180
tccggtctac	gcttgggcct	ttgcggacgg	tcccagcgt	ggtcgcggtt	gcgccgcgaa	240
agcggcgggg	cggttgccat	cagggaatgc	tcaccgcgc	ggcactgcac	ggccagtgcc	300
gcggcgatgt	cagccatcgg	gacatcatgc	tcgcgttcac	actcctcgac	cagtcggcgg	360
aacagctcga	ttcccggaac	gcccagcgca	ttggtgatgg	aatcggcgaa	cttgccacc	420
cgctgggtgt	tgacatcctc	gacggtgggc	aattgcccc	ggtaacgttt	gccgcct	477

<210> 183
 <211> 461

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 183

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cggtccgacc ctgttcgacg gctacctgaa tcaacccgat gccaccgccg cggcggttcga 60
cgccgacagc tggtagcgca ccggcgacgt cgcggtggtc gacggcagtg ggatgcaccg 120
catcgtggga cgcgagtcgg tcgacttgat caagtcgggt ggataccggg tcggcgccgg 180
tgaaattgaa acggtgctgc tcgggcatcc ggacgtggcg gaggcggcag tcgtcggggg 240
gcccgcagat gatctaggcc agcggatcgt tgcctacgta gtcggctcag cgaatgtcga 300
tgccgacggg cttatcaact ttgttgccca acaactttcg gtgcacaagc gcccgcgcga 360
ggtgcgtatc gtanatgcgc tgccgcgcaa cgccttgggg aaagtgtctc agaacattgc 420
tgtcagaagc tganctacgc gaattatcgt gttacgctgg a 461
```

<210> 184

<211> 440

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 184

```
atactcaagc ttgccgaagt tccgatgggt cgcgcggcg agcccagcga agtcgctacc 60
gtggccgtgt tcttggttcc ggatctatcc tcgttcatga ccggcaccgt gttggacgtg 120
actggcggcc ggtccatatg acaccgagat cattgccacg gtacggcaat tcgtcaagaa 180
ggaaatcttt cccaatgcac cggccctcga acgtggcaac agctaccgc aagaaatcgt 240
cgatcggctg ggtgttattg gcttgcctcg tcgccggctg caagggatc gacaccaccg 300
agttcattct cgggcgtgcc ggcgcatcgt agctggcggt gcgcgctgcc cagcaccgtc 360
ataggtactt gacgatggtc cacgtcggac gagcgcctcc acgtcgtcgc cgaacgggat 420
gcatggcgcc tacgattctc 440
```

<210> 185

<211> 515

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 185

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cggtgtcggc accggcgctc tgcagttggt aggcctgcag tttgtgcatc aggccgatgc 60
cgcggccctc gtggccacgc atgtacagca ccacgccgcg cccctcacgg gcgaccatcg 120
ccagcgcggc gtccagctga ggcccgaat cgcagcggcg tgacccaaac acatcgccgg 180
tcaagcactc cgaatgcacc cggaccagca cgtcgtcacc gtcggcgttg ggcccggcga 240
tctcgccgcg gaccagcgcg acatgttcca cgtcctcgta gatgctggtg tagccgatgg 300
cgcgaaactc cccatgacga gtcggaatcc ggcctcggc gaccgcgtca atgtgcttct 360
cgtgcttgcg ccgccattcg atcaagtcag caatggtgat cagcgccaga ccgtgctcat 420
cggcgaacac cgcaattcat cgggtgttgcg ccatcgagcc ctcatctttt tggctgacga 480
tctcgcaaat cgcccccgcg ggttgacgcc ggcat 515
```

<210> 186

<211> 345

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 186

```
atactcaagc tttgggtgaa agccgatcac cggaagccgc atgatcagcc acgtttcgcg 60
ccgccgggca tacggcgggc taccgatctc cgcgtcatac acccgcggtt aatcgccgac 120
ggtgccgggt cgcgagccga aggtgacgac gctgattgaa tcgagttcca ggtccagcgg 180
gtggcgcagc aacggcgcgga gctcaacgac gtcaatcacg ttgtcgcttt ctacggtcac 240
```

cgaccgggtg accgtntctg cccgggtgcgc tcggccgata agttgcaccg ccaccaccgc 300
gacaccgtct tgcacgcgga cccacccccg gatccgttgt tggcc 345

<210> 187
<211> 366
<212> DNA
<213> Mycobacterium tuberculosis

<400> 187
agcttgctgg catccgctcc agtagcgccc cgcgcgtggc ttccagcgcc cgcagatgct 60
ccatgagccg gccggtcgag tcggcgccgg cgttcaccgc caccgcccag gagctggcgg 120
ccagcatctc cgccttcacg cattgcgcga tcacagagag aatatacgtc tcatattcgt 180
tggaggctgt cgcaggcaat cggtcgatga cggatttgat ggcatcgagc tgtgcttcgg 240
cgtagccctc cagcacgtcg gtatcgctgt ggcgggtccac gacgaccgca ccggcgccggc 300
ggacagccgt cgggttggac gntgtgcggc gatcagtcgg gccagctccg cctcgggatc 360
agcggc 366

<210> 188
<211> 423
<212> DNA
<213> Mycobacterium tuberculosis

<400> 188
atactcaagc ttgctgcagc ttcctatgac tgctcccgaa acctgggggt gtgcctgctg 60
tgtatgcacg gcatacggac atccttcccc tgagaccgc ggtcgaacca gccacgtgtc 120
catcatcagg ggtcaacccc ggccaagggc gacggcacgc caagttcgcc gaccgttaac 180
ctagtgtgt tagcttcatt tgctgcgagc aaaacagctg gtccggcgtt aggaactgaa 240
ttgaaactca accgatttgg tgccgcgcta ggtgtcctgg ctgcgggtgc gctggtgttg 300
tccgcgtgtg gtaacnacna caatgtgacc gggggaggtg caaccactgg ccaggcgtcg 360
gcgaaggtcg attgcggggg gaagaagaac tcaaagccag tgggtcgacg cgcaggccaa 420
cgc 423

<210> 189
<211> 453
<212> DNA
<213> Mycobacterium tuberculosis

<400> 189
agcttgacgc ggagacggac acattgcgaa cattgatgac aaaatagaaa tcattgatgg 60
tttgagtcac caggccgacg aagccttcgc cgagccaaat tccaatcaag aggcccaagc 120
ccgtaccaat cagcccggca acgagggatt ccgtcattat cagccaaaat aactgctctc 180
gggttacacc caaacagcgc aatatggcga aaaacggctg ccgttgacg acattaaatg 240
tcacggtatt gtagattaaa aagataccca ccaacaaggc aatcaaactg agagcggtta 300
aattgaccgt aaaagcgtcc gtcatctgtt tgacggtgtc ccgttgggta tccgacgttt 360
ccatacgcac accggccggc agtcctttgtt ggatgcgtgt tgcagtggcc tcattcttga 420
tgatcaaata gatgtggctc agtccttcgg gca 453

<210> 190
<211> 402
<212> DNA
<213> Mycobacterium tuberculosis

<400> 190

atactcaagc	ttcgggtcag	gcggcgctgc	tggtaaagtc	gctgaccggt	gcaggttttcg	60
acaatgtggt	gccgggttcgg	cggctacgtg	ccatcgagac	actggcgagc	gctatcgcac	120
ccgttatcgg	ctacgagcaa	atcgcggtat	gcgttcttga	gcatgagtcg	gcgaccgtcg	180
tcatggtcga	cacccacgac	ggaaagacgc	agatcgccgt	caagcatgtg	tgccgcggat	240
tatcaggact	gacctcctgg	ctgaccggca	tgtttggtcg	cgatgcctgg	cgcccgccg	300
gcgtggtcgt	ggtccgctcg	gatagcgagg	tcagcgaatt	cncntggcag	ctccaaaggg	360
tcttgccggt	gccgggtcttt	gcgcaaacna	aggcncaggt	ta		402

<210> 191

<211> 427

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 191

tgatcgcgca	tcacctgctt	cataaaactgg	aagcagcgca	gcgcttcctt	ttcggccgca	60
acatgagcca	gcctctcgtc	ggcggtcggg	tgtaggtgct	cgggcagctc	ggccgcgaca	120
gccgcctgac	cctgaaacca	gcttccatat	cccgcgacga	acgacgccag	tccgctacgt	180
aacccctccg	cgactgtcca	tggaacaacag	cgcgttctcc	accgaccggg	cccgggtgtg	240
gggtgtttcg	gcgaccggca	gccaggtggt	ccacactgcc	gacggggcgc	gcgagccgtt	300
caccgaccag	gccgcccagc	aagtccgccc	gatcgcatat	tccaaccggt	tgcggtactg	360
caggttcagc	tggcgtactc	ctcgctcgcg	tcggcgaggt	cttgctccag	cacgtcgcan	420
acggcag						427

<210> 192

<211> 347

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 192

caaagcgcgca	actgctcgcg	gcagcccacg	acgtgctgcg	tcggattgcc	ggcggcgaaa	60
tcaattccag	gcagctcccg	gacaatgcgg	ctctgctggc	ccgcaacgaa	ggactcgagg	120
tcaccccggt	gcccggggtc	gtggtgcacc	tgccgatcgc	acaggttggc	ccacaaccgg	180
ccgcttgatg	cccggtcggc	aagcccggca	gttgccaaac	ccagcgtgat	caggctcggc	240
tcgcgagttc	cggaagaag	tggtccgccc	tgatcaccta	ccatccgcca	ggatctgcgt	300
gtcttcacca	cgcccgccaa	ggaggttggt	gtggtgctat	cgaccgn		347

<210> 193

<211> 330

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 193

ccggaagccg	catgatcagc	caagttttgc	gccgcccggc	atacggcggc	gtaccgatct	60
ccgcgtcata	cacccgcggg	taatcgccga	cgggtgccgt	tcgcgagccg	aaggtgacga	120
cgctgattga	atcgagttcc	aggtccagcg	ggtggcgagc	caacggcgcg	agctcaacga	180
cgtcaatcac	gttgtcgctt	tctacggtca	ccgacccggg	gaccgtngtc	gcccgggtgcg	240
ctcggccgaa	aanttgacc	gccaccaccg	cgaaacccgc	ttgcacnccg	gaagccaccc	300
ccgatccggt	gttggggccag	gttattgggt				330

<210> 194

<211> 215

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 194

```
ccggaaccgc cgacggcacg gtataacgcc tccgcatatg ggctcgacaac cagcggggtcg 60
gactttctggg cttctagcgt tcgcgcngtc gcgacaaaca gcgcggtcga accgacactc 120
gttgatgatgt cctagctatc acgttcggta cgcacccaat cgagtctagc gcgggtagnt 180
cagccccgat ctccangctc cgccgagcca ggcgc 215
```

<210> 195

<211> 225

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 195

```
ctggtttatg tcccgttgaa gttccatcac ccgatgtggc gggagcactg ccagggtcgat 60
ctcaactacc acatccggcc gtggcggttg cgcgccccgg ggggtcggcg cgaactcgac 120
gaggcggtcg gagaaatcg cagcaccocg ctgaaccgcg accaccgct gtgggagatg 180
tacttcgttg aggggcttgc caaccaccgg atcgcggtgg ttgcc 225
```

<210> 196

<211> 161

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 196

```
ccgagcagtt gggaatcgct ctgcancaaa ccaatattct gcgcgacgct gcgcgacgag 60
ctggaccgat taggcgtacg cctccgnctg gacgacaccg gggcactcga tgacccccgac 120
gcctacgctc gcaggatatt gttcgccgga cccctctcta g 161
```

<210> 197

<211> 240

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 197

```
tatataatac tcaagcttgc cgacgccaac gctcgcgcga tgttggttagc ccgacccggc 60
tcttacatgg caccggtgcc ccacacgtca gcctgtgacg tctgcaccg cgactcttta 120
catagaatgt ggattgccgg attgggggatg tccggcatcg ctcaatctgt agtcgcggtt 180
gtcccgcgag ggccatgtgg atgggggggaa ggatccgtgg cgtccgggat caccatgggg 240
```

<210> 198

<211> 348

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 198

```
atactcaagc ttgccgaagt tccgatgggt cgcgcggcg agcccaacga aatcgctagc 60
gtggccgtgt tcttggttcc ggatctatcc tcgtacatga ccggcaccgt gttggacgtg 120
actggcggcc ggttcatatg acaccgagat cattgccacg gtacggaaat tcgtccagaa 180
ggaaatcttt cccaatgcac cggccctcga acgtggcaac agctaccgc aagaaatcgt 240
caatcggctg ggtgttattg gcttgctcgg tcgcgggctg cgagggtttc tacaccaccg 300
agttcattct cgggcgtgcc ggcgcatcgg aactggcggt gcgcgctg 348
```

<210> 199
<211> 371
<212> DNA
<213> Mycobacterium tuberculosis

<400> 199
gcaccggcgt cctgcagttg gtaggcctgc agtttgtgca tcaggccgat gccgcggccc 60
tcgtggccac gcatgtacag caccacgccg cgcccctcac gggcgaccat cgccagcgcg 120
gcgtccagct gaggcccgca atcgacagcg cgtgacccaa acacatcgcc ggtcaagcac 180
tccgaatgca cccggaccag cactgtttca cgtcgggcgt tgggcccggc gatctcgccg 240
cggaccaacg cgacatgttc cactgcctcg tagatgctgg ttagccgat ggcgcgaaac 300
tccccangac aagtcggaat ccgcgcctcg gcgaaccgct caatgtgcct ctcgtgcttg 360
cgccgccatt c 371

<210> 200
<211> 165
<212> DNA
<213> Mycobacterium tuberculosis

<400> 200
tggtccgtgt gcgcatacca atacaacgcg ccggggcacct gacgcggcgg ccgcaaccaa 60
tcgggtggcca tcgccatctt ctgctacccg gtcaacggac gcaccttctc ctggccgacg 120
tagtgcgccc acccgccgccc gttgcgtccc atcgatccgg tcaac 165

<210> 201
<211> 390
<212> DNA
<213> Mycobacterium tuberculosis

<400> 201
ggcgtgttgg ccaccggggc cactccgcac aatctgtacc cgaccaagat ctacaccatc 60
gaatacgacg gcgtcgccga ctttcgcggg taccgctca actttgtgtc gacctcaac 120
gccattgccg gcacctacta cgtgcactcc aactacttca tcctgacgcc ggaacaaatt 180
gacgcagcgg ttccgctgac caatacggtc ggtcccacga tgaccagta ctacatcatt 240
cgcacggaga acctgccgct gctaaagcca ctggcgatcg gtgccgatcg tggggaaccc 300
actggcgaac ctggttcaac caaacttgaa ggtgattgtt tacctgggct acggcgaccc 360
ggcctatggt tattcgacct ccccgcccaa 390

<210> 202
<211> 427
<212> DNA
<213> Mycobacterium tuberculosis

<400> 202
cgtccgtgnc ccctcaancg cgtgnngccg aagcggctgg ttacgactcc ctgtttgtga 60
tggacacttc taccaactgc ccatgttggg gacgcccagc cagccgatgc tggaggccta 120
cacggccctt ggtgcgctgg ccacggcgac cgancggctg caactgggcg cgttggtgac 180
cggcaatacc taccgcagcc cgacctgct ggcaaagatc atcaccacgc tcgacgtggt 240
tagcgccggt cgagcgatcc tcggcattgg agccggttgg tttgagctgg aaacaccgcc 300
agctcggctt cgagttcggc actttcagtg accggttcaa ccggctcgaa gaggcgctac 360
agatcctcca gccaatggtc aagggtgagc gcccaacggt tttcgcgat tggtaacca 420
ccgaatc 427

<210> 203
<211> 498
<212> DNA
<213> Mycobacterium tuberculosis

<400> 203
ccgcttccgt gtaaccgagc anngcgagcg anctggcgag gaagcaaaga agaactgttc 60
tgtcagatag ctcttacgct cagcgcaaga agaaatatcc accgtgggaa aaactccagg 120
tagaggtaca cacgcggata gccaatcag agtaataaac tgtgataatc aaccctcatc 180
aatgatgacg aactatcccc cgatatcagg tcacatgacg aagggaaaga gaaggaaatc 240
aactgtgaca aactgccctc aaatttggct tccttaaaaa ttacagttca aaaagtatga 300
gaaaatccat gcaggctgaa ggaaacagca aaactgtgac aaattaccct cagtaggtca 360
gaacaaatgt gacgaaccnc cctcaaactc gtgacagata accctcagac tatcctgtcg 420
tcatggaagt gatatcgcgg aaggaaaata cgatntgagt cgtctggcgg cctttctttt 480
tctcaatgta tgagagcg 498

<210> 204
<211> 265
<212> DNA
<213> Mycobacterium tuberculosis

<400> 204
tgacacccaa cagagggcac ttaagatggc aatgcggccg cctacctgca cgttttcgcg 60
atgtcagagg atgccgaggg agaacaatgc gagcacggcc gctgacnttg ctcaccgctt 120
tggcggcggg gacattggtg gtggttgcg gctgcnaggc ccgantcnag gccgaagcat 180
atagcgcggc cgaccgcatt tcgtctcgac cgcaagcgcg acctcagccg cagccggtgg 240
agctactgct gcgcgccatc acgcc 265

<210> 205
<211> 369
<212> DNA
<213> Mycobacterium tuberculosis

<400> 205
acgggcgacg ctgaggtggg cccgcggcta ttcattgctgt cgtccacgtc cagcgacgca 60
ctgcgccaga cggcccgcga actagccacc tgggtggaag aacaccagga ctgctgtggc 120
gcctcggatc tggcctacac gctggcgcggt ggccgcgcgc accggccggt gcgcaccgcg 180
gtggttgccg ccaacctgcc ggagctcgtc gagggtttgc gcgaggtggc cgacggtgac 240
ccctctatga cgcggcggtg ggacactgtg atctaagacc ggtctgggtc ttctccgggc 300
aagggctca gtgggcggcg atgggcaccc aattgctcgc cagcgaacca gtgttcgcgg 360
ccaccatcg 369

<210> 206
<211> 428
<212> DNA
<213> Mycobacterium tuberculosis

<400> 206
atactcaagc ttcgcgagat ccggatggca ctcacgctgg acaagacctt cacaaaatct 60
gaaatcctga cccgatactt gaacctggtc tcgttcggca ataactcgtt cggcgtgcag 120
gacgcggcgc aaacgtactt cggcatcaac gcgtccgacc tgaattggca gcaagcggcg 180
ctgctggccg gcatggtgca atcgaccagc acgctcaacc cgtacaccaa ccccgacggc 240
gcgctggccc ggcggaacgt ggtcctcgac accatgatcn aaaacttccc ggggagggcg 300
aggcgttgcg tgccgcccgagg ggcgaaccgc tgggggttct gccgcagccc aatgattgcc 360

gcgcggctgc atcgcgggcg gcgaccgcca ttcttctgcg aatacgtcca ggagtactgt 420
ctcggggc 428

<210> 207
<211> 378
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 207
agcttatgtg gccgcccacc taccttatct agcctagcta actaaatcca gtgccgacag 60
tgcgcggtcg gccacccagc atgagggtat gaccacggca tatgccagcg cgctggcggc 120
gatgccgacg ctgaccgagt tggccgctaa tcacaccagc catgcggtgt tgctgggaac 180
gaatttcttt ggaatcaata cgatcccgat cgcgctcaat gaggccgact atgcgcggat 240
gtggattcag gcggccacca cgatgagtat ctatgagggc acctccgatg cggcgctggc 300
gtcngcaccg caaaccacac cggctccggt actgttcaac ggcggtgctg gcgtttgcca 360
gcgcctgccg gcgatctc 378

<210> 208
<211> 284
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 208
atactcaagc ttgccaccca tgccgagcaa ggtcgactca gcgatgacga attgttcttc 60
ttcgcggtgt tgctgctggt tgcgggctat gagagcactg ctcatatgat tagcacnttg 120
tttctgacgc tgcccgacta tccagatcag ctgacactcc ttgcgcagca accagacctg 180
atcccgtcgg cgatcgagga gcacctccgc tttatatcgc aatccaaaac atctgccgca 240
caacgcgcgt cgactattcg gtcggtcaag cggatcatccc ggga 284

<210> 209
<211> 236
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 209
ccggggtaga acgatgcgat ctggggccatg tcgacatcgg tggtagaggt aaaccgcgcc 60
gtgtgcgcgg tctcgagat cagaacgtgg tcgcagttga caccgcgggc tttcagccag 120
tcgcgataat cggcgaagtc ggcgcctgcc gcccgaacta gcgcgacctc gccacctagc 180
acaccgatgg cgaaggccat gtttcgggcc acgcgcgcgc ggtgcatcat caactc 236

<210> 210
<211> 278
<212> DNA
<213> *Mycobacterium tuberculosis*

<400> 210
atactcaagc ttggcggaac cgccaactacc gggctcacca ggtcctgtgc cgccaccgcc 60
ggcgccgaaa gcaccatcag gtcgtagttg tctggacggt cgacaccgta agcgaacaca 120
atgccgcgcg ccatgctgtg cccgagcaag atgcgcttgc acccgggata ttcccggtg 180
gcgatcccaa cgagggtgtc gaagtcagcg gtgtatctga gatgtctctc actatcatcc 240
gtttggcacc cgagcgggca tgcccgcggg ggggtcaac 278

<210> 211
<211> 360
<212> DNA
<213> Mycobacterium tuberculosis

<400> 211
gtcgacggca tcaaggtccg cagtgatggt gttcatctca cccaggaagg cgtgaagtgg 60
ctgataccgt ggcttgagga ttcggtgcgg gtcgccagtt aatccgccgt gtgctccgga 120
tgagcgcgac ggtaaccctg gaattgtgct gtgtgctggc tgtgtcgttg tgatgagcct 180
gtctaagtgg tgcgtaaccg tttgacgagc cgcggcctcg ctgcaaacaat tgaagcccg 240
acgtctgggt ttgtattttac acaacgaggg cgctccccga tctggcgcg cgaacgaggt 300
gcncaactatc cattcgaggt gaactggact ccttgatgct catgccgggt cggttttgtc 360

<210> 212
<211> 256
<212> DNA
<213> Mycobacterium tuberculosis

<400> 212
atactcaagc ttgcggttcga tgaagtagtc gtcgggtcagc gccgcctctt cgagctcctt 60
ggcgatgccc agcaaggagt catcgccgcc gagcttggcc aggatcttgt cggcctgttc 120
cttgacgatg cgggcccgcg gatcgtagtt cttgtagaca cgatgaccga aacccatcaa 180
tttgaccccc gcctcgcggt tcttgacctt gcgttacaaa ctcgctgacg tcgtcgccgc 240
tgtcgcgaat gccctc 256

<210> 213
<211> 262
<212> DNA
<213> Mycobacterium tuberculosis

<400> 213
ngtcaagccg agcatgcgcg aggnaacgac gaacccaaca agccatggtg gttggcgccg 60
tcgagaggtc ggcggtcgcc acaacgggaa gatcgccctt agcgtcgctc gaccgccgcc 120
tcgagttggg tcataacgaa gtagctgatg ccgatcatgt cgacgtttcc gtcgcatcag 180
cgtgcagcgg cgacccactc gacgaggtct cgggtgccgc gcggccaggg caccagcagt 240
gacgattcca ggcgccgtcg gg 262

<210> 214
<211> 336
<212> DNA
<213> Mycobacterium tuberculosis

<400> 214
cgataatcgc ttccggtaag tgcagcagct ttacgacggc gactcccatc ggcaatttct 60
atgacaccag atactcttcg accgaacgcc ggtgtctgtt gaccagtcag tagaaaagaa 120
gggatgagat ctccccgtgc gtccctcagta agcagctcct ggtcgcgctc attacctgac 180
cataccgag aggtcttctc aacactatca ccccgagaca cttctagagt aaacttccca 240
tcccgaaccac atataggcta aggtaattgg cattaccgcg agccattact cctacgcgcg 300
caattaacga atccaccatc ggggccgctg gtgtcn 336

<210> 215
<211> 259
<212> DNA

<213> Mycobacterium tuberculosis

<400> 215

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naataactcaa gcttttctcgt gattaccacc cgtgtaattt gggatgggca aaaaggcgaa 60
tcaccgcgtg gccacaaacg ccgggagggg caatctcggg cggctagggc ttctcgcggg 120
aaggcccga aagtacggcgt ttcaacacgt cgcgtcgccc tccgaccgag aacattcggg 180
gatggcagca acctggtatc accctggccg ggcaatgatc tgcagcgtcg ccgcgggtag 240
tgnccgcccc ggcggttac                                     259
```

<210> 216

<211> 325

<212> DNA

<213> Mycobacterium tuberculosis

<400> 216

```
ccaactagag catcgggaca tacggagtca actaccgggc caacgggtgat ttcttgggcg 60
ccgctgacgg cggaacgac gccagcgacc acattcagca gatggccagc gcgtgcccgg 120
ccacgatgtt ggtgctcggc ggctactccc aggggtgcggc cgtgatcgac atcgtcaccg 180
ccgcaccact gcccgggtctc gggttcacgc agccgttgcc gccgcgagcg gacgatcaca 240
tcgccgcgat cgccctgttc gggaatccct cggggccgag ctggcgggct gatgatcgcc 300
ctgacccctc aattcgggtc caaga                                     325
```

<210> 217

<211> 300

<212> DNA

<213> Mycobacterium tuberculosis

<400> 217

```
atactcaagc ttgctgcagc ttctgtgac tgctcccgaa acctgggggt gtgcctgctg 60
tgtatgcacg gcatacggac atccttcccc tgagaccgac ggtcgaacca gccacgtgtc 120
catcatcagg ggtcaacccc ggccaagggc gacggcacgc caagttcgcc gaccgttaac 180
ctagtgtgtg tagcttcatt tgctgcgagc aaaacagctg gtcggccggt aggaactgaa 240
ttgaaactca accgatttgg tgccgcccggt aagtgtcctg gctgccgggt cgctggtgtt 300
```

<210> 218

<211> 265

<212> DNA

<213> Mycobacterium tuberculosis

<400> 218

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agcttgccgc gcgtggcgat cgcggttcaa ggccgcgtct tcgagcaca aagcgaaga 60
cagctcggcg acggagcctt tatcgacatc cgttcgggct ggctgaccgg ccgcgaagaa 120
ctgctggacg cgttggtgtc gacggtgccg tggcgagccg agcgcggtca gatgtacgac 180
cgggtggtcg atgtgccgag gctggtgagt tttcacgacc tgaccatcga agatccgcgg 240
catccgcagc tggcgcggat gcgcc                                     265
```

<210> 219

<211> 362

<212> DNA

<213> Mycobacterium tuberculosis

<400> 219

```
aataactcaag cttgcgcacg accaggacgt cgagtggcgc ttgcagtgac ttggcgacct 60
```

caaaggccac	cggtagccccg	ccgcgcggca	agccaaggac	nacnacggcc	ttgccggata	120
gctgcccag	gcgttgccgc	aactggcgtc	cagcgctgcc	acgatcgta	aagagcttca	180
tctgccgagt	gtgtcgccat	ctcatggctc	caaatatgga	attaggtccc	tgggccgact	240
gacgacagtc	cctcagcgac	cggattgcgc	atcccgctt	gtacgctgct	ccgcaaattc	300
cgggcttgcg	tccgcggaag	cgaactcggc	ggcgctacgg	tggtggctca	cttcggccgt	360
gc						362

<210> 220
 <211> 486
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 220						
ggttggtgcg	gtccaccttc	gcggcgggcg	cgcgatatgc	cttgctggtc	ttgctcattt	60
gatatccaat	ctatgggtcg	tggttactca	gcgggcccga	gctggccctc	ccacgggtag	120
ggccctattc	gacggtgatg	cccatcgacc	gagcggtagc	ggcgatgac	ttggccgcag	180
cgtcgacgtc	gttggcgttg	aggctcgctc	tcttggtctc	ggcgatttcg	cggacttgat	240
cccaggtgac	tttggcgacc	ttggtcttgt	gcggctccgc	cgaaccttc	gccacaccag	300
cggccttaag	cagcagcttg	gcggcgggcg	gcgtcttcag	cgtgaaagtg	aagctacggg	360
cttcataaac	ggtgatctcc	accgggatga	cgttgccgcg	ctggttctcc	gtcgcggcgt	420
tgtacgcctt	gcagaactcc	atgatgttga	cccgtgctga	ccgaacgcgg	ggcccaactg	480
cggggc						486

<210> 221
 <211> 373
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 221						
atactcaagc	ttttcgaccc	gcaagccggc	ggtgcccctc	ctcgttccgc	tgcccgggtc	60
gctcgatcgg	ttcgggggtc	ccgcgctagg	cccaattgcc	cggctcctcc	tcggggccgt	120
ccacaacccg	catcgtcgcc	gggctagggt	caagccatgc	cggtaaacc	caggacgcca	180
gtgctgatcg	gctatggaca	ggtcaaccac	cgaggcgaca	tcgacgccna	aaatcagtc	240
atcgaacccg	tcgacctgat	ggccnccgcg	gcccggaaag	ccgccgagtc	caccgtgctc	300
gaagcgggtg	attccatccg	tgtggtgcac	atgctgtcgg	cgcattaccg	gaattcccg	360
gcgtctcctc	ggc					373

<210> 222
 <211> 331
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 222						
ncctggttca	tgaactggaa	gcagcgcagc	gcttctttt	cggccgcaac	atgagccagc	60
ctctcgtcgg	cggtcgggtg	caggtgctcg	ggcagctcgg	ccgcgacagc	cgctgaccc	120
tgaaccagc	ttccatatcc	cgcgacgaac	gacgccagtc	cgctacgtaa	cccctccgcg	180
actgtccatg	gacaacagcg	cgttctccac	cgaccggggc	cgggtgttgg	ggtgttcggc	240
aacggcaacc	aagttggtcc	acactgccga	cgggcgcgcg	aaatccgttc	accgaaccag	300
gccgcnaaa	caattccgcc	cgatcccata	t			331

<210> 223
 <211> 377
 <212> DNA

<213> Mycobacterium tuberculosis

<400> 223

```
atactcaagc ttgtcgggat caatctcgag ggcattccacg cacgaaaagt aaactctatc 60
aagctttttg acgacaccca cggacgcccc atatatgttc ggggtgggcaa gaacgggtccc 120
tacctggaac gtttggtggc cggcgacacc ggtgagccca cgccgcagcg ggccaacctc 180
agcgactcga ttaccccgga cgaactgact ctacaggtgg ccgaagagct ctttgccaca 240
ccgcaacagg gacggacttt gggcttggac ccagaaaccg gccacgaaat ctttgccagg 300
ggaaggccgg tttgggcctt atgttaccta tctctgccg gaacctgcgg ctgatgcggc 360
cgcgccgct cagggan 377
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<210> 224

<211> 436

<212> DNA

<213> Mycobacterium tuberculosis

<400> 224

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agcagctagc cgcgctcgcc gcgctggtcg gtgcgtgcat gctcgcagcc ggatgcacca 60
acgtggtcga cgggaccgcc gtggtgcgcg acaaaccgg accactgcat caggatccga 120
taccggtttc agcgcttgaa gggctgcttc tcgacttgag ccagatcaat gccgcgctgg 180
gtgcgacatc gatgaagggtg tggttcaacg ccaaggcaat gtgggactgg agcaagagcg 240
tggccgacaa gaattgcctg ggctatcgac ggtccagcac aggaaaagggt ctatgccggc 300
accgggtgga ccgctatgcg cggccaacgg ctggatgaca gcctcgatga ctccaagaaa 360
cgcgaccact acgccattca agcggtcgtc ggcttcccga ccgcacatga tgccgaagaa 420
ttctacagct cctccg 436
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<210> 225

<211> 539

<212> DNA

<213> Mycobacterium tuberculosis

<400> 225

```
cgcgactggc tccccggncg gctgctcggg tccgccgata gagaccggga tgtcgcccga 60
cgacgggcag cggggttgcg tgggacgggg cgggggtcgg gcagcccaag caacgggcta 120
gtccccgaat cctacggagc cgtcacctac gcctacgtaa tagtagctat caataacagt 180
tgacatacgc aacgatctgt gagatcaata ttgcctgacg catgtcaaga caggcgtcaa 240
gacaggtgtc aataattcgc tccgctgggtg acggtaacgg gtcgtgcggg tgtgtgacgc 300
ctaagggaagg agtgtgggtg gtgacgctga gagtgggttc tgagggtttg gcggccgcca 360
gtgcggcggt ggaggcggtg accgcacggc tggccgcccgc acacgctggc gcggcgccgg 420
cgattacggc ggtggtggcg cccgcggcgg atccggtgtc gttgcagaat gcggtgggggt 480
ttagcgcctt aagtagccag catgcgcgca tcgcggcgca aagggtccaa gaactgggt 539
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<210> 226

<211> 517

<212> DNA

<213> Mycobacterium tuberculosis

<400> 226

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atactcaagc ttattgaacc gcgggtcgca ggcaaagtgg acctcataac gactcgggtc 60
cagcgaccgc gccaacacga acggccggac gacgtgggccc agggtcgcgg cctcccctac 120
aaacaggatc cgttgcctgc gaacgacagg ctccggtgcg gcgttgggcg ccgtgctcgt 180
cccagcgtcc ggtcccggtt cgccggcgac gcttggttcc tccatactcg ccccctaata 240
tcgaggcagc ccgtacccgc aggcacacct ccaaaaatgc aatcccgcaa aatgcaatgc 300
gtcnagctat ttctcacacc gaccgctagt tgccgatcag aaatccgttg ggcgcggaag 360
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tccagccgaa	tttgtttctcc	cgctccgcat	catgcttgta	atcgtttgga	aattcattcct	420
catatgcctc	gatcgcttca	taggggtccag	gccccaaaccc	gggcaggact	gggtggccgt	480
tgatgttgga	atcctccact	actaggtatt	caccggc			517

<210> 227
 <211> 488
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 227						
gtctcgatca	tggccaaaga	gctcgacgaa	gccgtagagg	cgtttcggac	ccgcccgcctc	60
gatgccggcc	cgtatacctt	cctcgccgcc	gacgccctgg	tgctcaaggt	gcgcgaggca	120
ggccgcgtcg	tcgggggtgca	caccttgatc	gccaccggcg	tcaacgccga	gggctaccga	180
gagatcctgg	gcatccaggt	cacctccgcc	gaggacgggg	ccggctggct	ggcgttcttc	240
cgcgacctgg	tcgcccgcgg	cctgtccggg	gtcgcgctgg	tcaccggcga	cgcccacgcc	300
ggcctggtgg	ccgcgatcgg	cgccaccctg	cccgcagcgg	cctggcagcg	ctgcagaacc	360
cactacgcag	ccaatctgat	ggcagccacc	ccgaagccct	cctggccgtg	ggtgcgcacc	420
ctgctgcact	ccatctacga	ccagcccgcg	gccgaatcag	ttgttgccaa	tatgatcggg	480
ttctcgac						488

<210> 228
 <211> 264
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 228						
atactcaagc	tttcgtcagt	tcattggcgcc	agcagaccaa	caagagcatc	gggacatacg	60
gagtcaacta	cccggccaac	ggtgatttct	tggccgcgcg	tgacggcgcg	aacgacgcca	120
gcgaccacat	tcagcaaattg	gccagcgcgt	gccggggccac	gaggttggtg	ctcggcgggct	180
actcccaggg	tgcgggccgtg	atcaagatct	tcaccgcgcg	accactgccc	ggcctcgggt	240
tcacgcatcc	gtttggccgc	cgcc				264

<210> 229
 <211> 229
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 229						
gccccgtgta	atttgggatg	ggcaaaaagc	gaagcaccgc	gtggccacga	acgccggggag	60
ggacaatctc	gggcggttag	ggcttctcgc	gggaaggccc	gaacgtacgg	cgtttcaaca	120
cgtcgcgtcg	ccctccgacc	gcgaacattc	ggggatggca	gcaacctggt	agcaccctgg	180
ccgggcgatg	atctgcagcg	tcgcgcgggg	tagtctccgc	ccgggcgcg		229

<210> 230
 <211> 266
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 230						
atactcaagc	ttcctttgac	cgaacgcgtc	caccgcaccg	tgagattggt	ggcgccattc	60
gtcgtggtgt	agctgctgtt	ggcggcgtcg	ccgtattgtg	cgggccagcc	ttgtgcgggg	120
gccgcttcta	cccacaagtc	ggcacttccg	caaccgccca	gctcgaccgc	gaattacggc	180
ggccgcaacg	gccgcccggaa	ggcgtcacgc	aatcgcttat	cctttccagg	ttcccaaata	240

ctccgcttac ttgggtcctt catcgg

266

<210> 231

<211> 258

<212> DNA

<213> Mycobacterium tuberculosis

<400> 231

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ggcagcggcg acaaccggaa cgctcgcacg gtgctcaatc acgggtgcac ggtgtgcac 60
agaatggcgg gggttcgttg tcgcggtagg gcgttcggcg aggaggtagt gtctaccct 120
tgcccgcggg ttcgtgcgga ctgaaaggga ttctattggg aaccacggc tgcgtatcgc 180
agggcctcgg tgacgtctgc ttctcnagc tcaggaagtt cggcgagaat ctcggtgat 240
gttatttggc ccgcctac                                     258
```

<210> 232

<211> 224

<212> DNA

<213> Mycobacterium tuberculosis

<400> 232

```
atactcaagc tttctcggct tctctgatag cctgagaaga aacccaagt taatccgctg 60
cttcacctat tctccagcgc cgggttattt tctcgccttc cgggctgtca tcattaaact 120
gtgcaatggc gatagccttc gtcatttcat gaccagcgtt tatgcactgg ttaagtgttt 180
ccatgagttt cattctgaac atcctttatt cattgttttg cggt                                     224
```

<210> 233

<211> 333

<212> DNA

<213> Mycobacterium tuberculosis

<400> 233

```
atactcaagc ttggtgaccg gcaccgcgat acgttgccgc aggcatctgg gctggcggtg 60
gttcgcgcgt ccgaagccgt cgaacaccat cgccagcgcg gcttccacat caacgaccat 120
ttcggccagc ttgcggcgca tcagcggcctt gtcgatgagc gccccaccga atgcccgcgc 180
ctgcccggcg tatcacatcg attcgaccat cgcgcggcgc gcgttgccga gggcgaacga 240
ggcgggtgcc aaccgcaatc tgtttggtca gctccctcat gcgggttgat tccttgccgt 300
ccggacgggc ccgcgtcatg cgctcggttc gcc                                     333
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<210> 234

<211> 407

<212> DNA

<213> Mycobacterium tuberculosis

<400> 234

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ccgttgcgca gcgtgagccg atagttgaca tccggctcgg tgaagtgaa atcgatggcc 60
aggctcaggt cccatgcgcg tgggccattg atgctgatcg ccaggacgtc aaagatttgg 120
tccggcgtca gctgggcgaa aaacgtgggc gccgggactt gcccgagct gcccggttc 180
ccgtcgcgca gctcggcggc cccggtcaga aagaaattgc gccaggtcgc acactccgcg 240
ccgtaggcca gctgctccag ggtgtcggca tagagccgc gggccgcagc gtgctcgtg 300
tcggcgaaca ccgcatggtc gagaagcgtt gccgccaac gggaaatcac ctgcgtcgaa 360
agcttcgcgg gccagctcca gcaactcggc gatgccaccc aacgcgt                                     407
```

<210> 235
<211> 389
<212> DNA
<213> Mycobacterium tuberculosis

<400> 235
ataactcaagc ttgcggatgt tacccttgac agcgtgaact atgtcnaaac acacggcacc 60
ggaacggtgt tgggggaccc catcgagttc gagtcgctgg cggccactta tggcctgggt 120
aaaggccagg gcgagagccc gtgcgcattg gggtcggtca aaaccaacat cggccacctg 180
gaggcggccg ccggtgtggc tggattcatc aaggcgggtgc tggcgggtgca acgtgggcac 240
attccccgca acttgcaactt cacccggtgg aaccgggcca tcaacacgtc ggcgacgcgg 300
ctgttcgtgc cgaccgaaag cgccccgtgg ccggcgggtg ccggtccacg cagggtgctgc 360
gtgtcatcgt tcggcctcag cgggaccaa 389

<210> 236
<211> 432
<212> DNA
<213> Mycobacterium tuberculosis

<400> 236
ccggtaacca gatcagctcg tcgacctcac tgccgggggt gaattcccca ccggtgctgc 60
gcgctgcccc gtagtgacac ttcttgacgc ctcgaaaagg ggagtcggtc gggtaggtca 120
ccgtcaggag ccgcctaccc aggttggcgc ggtgaccggt ctctcgagt atctcccgca 180
ccgccccac ccggtgcggtc tcgcccggat ccactttgcc cttgggcagc gaccagtcgt 240
cgtaacgggg gcggtgaatg acagcgatct cgaccggccc ttccgaatcg gactgcccg 300
gtcgccagaa caccgcaccg gcggcgatca caatccggcc cgccgagcgc cggcggggcg 360
acganttctg gatcgacacc tcaactcctg cagggtcaatt cggccaagct gctcgcggtc 420
gtggatgtgg tc 432

<210> 237
<211> 287
<212> DNA
<213> Mycobacterium tuberculosis

<400> 237
ataactcaagc ttgatgccgc cgaaaccgag cgtgagcacg ccgccaccca ccacgcgcgg 60
gtcggggcgc gggcccgggc cgccaggctg ctccgctcgg tgatggcacg ccaccgcgac 120
accaccgggc tgcgctacgt cgagccatac cgggcggagc tacatcggtc cggccgcccc 180
gtgttcgggc cctctttcga ggtcgaggtc tataccgatt tgcgcatccg cagccgcacc 240
ctggctcgtct cgtaccgtgc cctacctctg cttgtcgggc ggggcca 287

<210> 238
<211> 272
<212> DNA
<213> Mycobacterium tuberculosis

<400> 238
tccgtacggc ccgggtacgc ttcggtcgca gtgtgcgagt gatagatgac gaccgggacc 60
tcgtcggcat cttccatagc ccgccacacc tttagttgct caccggaatc caaccggtag 120
aaggtcggcg agcgcctcggc attggtcatc gggatatgcc gctcgggacg gtcagagccc 180
tcgggtccgg ccagcactcc gcaggcttcg tcggggtggg cgcgacgcgc atgggccacc 240
atccatccac cagggtctgcg cgaatcacc gc 272

<210> 239
<211> 410
<212> DNA
<213> Mycobacterium tuberculosis

<400> 239
ggacacattg cgaacattga tgacaaaata gaaatcattg atggtttgag tcaccaggcc 60
gatcaagcct tcgccgagcc aaattccaat caagaggccc aagcccgtac caatcagccc 120
ggcaacgagg gattccgtca ttatcagcca aaataactgc tctcgggtta caccctaaaca 180
gcgcaatatg gcgaaaaacg gtccgcgttg caccgacatta aatgtcacgg tattgtaaat 240
taaaaagata cccaccaaca aggcaatcaa actgagagcg gttaaattga ccgtaaaagc 300
gtccgtcatc tgtttgacgg tgtcccgttg ggtntccgac gtttccatac gcacaccggc 360
cggcagtcct tgttggtatgc gtgttgacgt ggcctcatct ttgatgatca 410

<210> 240
<211> 439
<212> DNA
<213> Mycobacterium tuberculosis

<400> 240
gcctggccca ggtgaaggcc gacctcgacg ccaaagccgc tgatccggca catgagtcgg 60
tggaactggga cttgaagtcg ctgcgatggg cgtggaaccg agccaaagat gacgtggcgc 120
cgtggtgggc cgagaattcc aaggagtgtc actcgtcggg gttggccgat ctggcccagg 180
gcctggctaa ttggaaagct ggcaagaacg ggaccgcgaa aggcgggcgg gtgggcttcc 240
cgcgattcaa atccggggcg cgtgatcctg gcaggggtgc gttcaccacc ggcaccatgc 300
gcatagagga tgaccggcgc acgatcacgg tcccgggtgat cgggcccgtg cgggccaaag 360
agaacaccgc ccgggtgcaa cgccacctcg tgagcgggcg cgcgagatc ctgaacatga 420
ccttgtcgca gcggtgggg 439

<210> 241
<211> 356
<212> DNA
<213> Mycobacterium tuberculosis

<400> 241
taactcaagc ttcaagtcgg cngtccgacc ctgttcgacg gctacctgaa tcaaccgat 60
gccccgcgcg ggcgttcgac ccgacagctg gtaccgcacc ggcgacgtcg cgggtggtcga 120
cggcagtggtg atgcaccgca tcgtgggacg cgagtcggtc gacttgatca agtcgggttg 180
ataccgggtc ggcgcgggtg aaattgaaac ggtgctgctc gggcatccgg acgtggcgga 240
ngcggcagtc gtcgggggtg tcgactatta tctaggccag cggatcggtg cctacgtagt 300
cggctcagcg aatgtcgatg cggacgggct tatcaacttt gttgccaac aacttt 356

<210> 242
<211> 341
<212> DNA
<213> Mycobacterium tuberculosis

<400> 242
ccatgtcgcc caacatatcg tcgatgttcg cgtcgtccgc ctccgcgacg tgggtctgtca 60
ccagtcaacg ttaacgcgcg cgcacatgtc ctgcggccgg gcaaaaacgt gaaaaacgag 120
cgggcgactg caatgtcatg acaccgacgc cgccgatggg cccagggtct ggcagattcg 180
atctgtgcgg ccagtgccag cagcgtcgcc tcgtcatacg gccggccgac gagttgaacc 240
gacatgggca tgccgtcgcc gtccgaagtcc caccggcacca cggccgcggg ctggccggtc 300
agattccana cttgaaagta ctgaagccgc tgcaccacca g 341

<210> 243
<211> 336
<212> DNA
<213> Mycobacterium tuberculosis

<400> 243
cgaaagcgtg aaacagctcg cggcagcccc cgacgtgctg cgtcggatag ccggcgggcg 60
aagatcaatt ccaggcagct cccggacaat gcggctctgc tggcccgcaa cgaaggactc 120
gaggtcaccg cgggtgcccgg ggtcgtggtg cacctgccga tcgcacaggt tggcccacaa 180
ccggccgctt gatgcccggg cggcaagccc ggcagttgcc aaaccagcg tgatcntgct 240
cngctctnta nttcggcgaa gaagtggctc gcctgatcac ctaccatcgg ccaggatctg 300
cgtgtcatca caacgctcgc caaggagggt gttgtg 336

<210> 244
<211> 337
<212> DNA
<213> Mycobacterium tuberculosis

<400> 244
tccgccacgc ttcgcgcgcg cgggcatacg gcgcgtaccg atctccgcgt catacaccgc 60
gggtaatcgc cgacggtgcc ggttcgcgag ccgaagggtga cgacgctgat tgaatcgagt 120
tccaggtcca gcgggtggcg cagcaacggc gcgagctcaa cgacgtcaat cacgttgctg 180
ctttctacgg tcaccgaccc ggtgaccgta gtcgcccggg gcgctcggcc gagaagctgc 240
accgccacca ccgcgacacc gtcttgacg cggaccacc ccggatcggg tggtggccaa 300
ggtaattggg tcattccatt tgacgggacg ccgaccc 337

<210> 245
<211> 337
<212> DNA
<213> Mycobacterium tuberculosis

<400> 245
cattctttaa cagttgtttt gggctcggca tggttagcca acgttctgcg gtccaccata 60
tcatcttggg ccggtagcgc tcgtccgggg tatgctgcg ccgggattct cgtgctatt 120
actcccccg aagaaccgcc accggtccag cgcgtgggccc gncgcggtcc catcaciaaac 180
tgaaccccc aacaggacat gcttatcggt agggcgcgcg ccaaggcggc agcaatcgca 240
tactgcgct ctgcgcgtca ctattaaccc acccggaact cacttccacc accccgaatg 300
gcgcccgggc attgatcatc tggcgacccg cggataa 337

<210> 246
<211> 343
<212> DNA
<213> Mycobacterium tuberculosis

<400> 246
cgggtgtcctg cagttggtag gcctgcagtt tgtgcatcat gccgatgccg cggcctcgtg 60
gccacgcgatg tacagcacca gcgcgcgcc ctcacgggcg aacatcgcca gcgcggcgctc 120
cagctgaagc ccgcaatcgc agcggcggtga ccaaacacat cgccgggtcaa gcaactccgaa 180
tgacccggac cagcacgtcg tcacogtcgg cgttgggccc ggcgatctcg ccgcggacca 240
tgcgcgacat gttccacgtc ctcgtnatg ctggtgtagc cgatggcgcg aaactcccca 300
tgacgagtcg gaatccgcgc ctcggcgacc cgctcaatgt gct 343

<210> 247
<211> 340
<212> DNA
<213> Mycobacterium tuberculosis

<400> 247
cggcatctgg cggctgaacc tgttcttggg caacatgccg aggatcgctt cttccaccac 60
gcggtcgggg tggcgttgca ttacctcacc gatggtgcgc ttgtgcagge cgccgggata 120
ccccgagtgc cggtaaacca tcttgtgctg cagtttgcgc ccgctgatgg cgaccttgtc 180
ggcgttgatc acgatnacna atcaccgcca ncgacattgg gggcgaacgt cggctcgtgc 240
ttgccgcgca gcaggctggc cgccgcgacg caaggcgcca accaccacgt ccgtggcgtc 300
gatgacgtac caccatcgcg tgggtgtcacc cgccttgggc 340

<210> 248
<211> 322
<212> DNA
<213> Mycobacterium tuberculosis

<400> 248
gcggcaaaaa ttgaagcact cntggccact nccgcccggga gggacaatct cgggcccggta 60
gggcttctcg cggaaggcc cgaacgtact gcgtttcaac acgtcgcgc gccctccgac 120
cgcgaaacatt ctgggatggc agcaacctgt tagcaccctg gccgggcat gatctgcagc 180
gtcgccgcgg gtagtcgccc ccgggcccgt acagtctgaa acgcgatgac catcgatgtg 240
tggacgccgc atccgacnca acggttccta cactgtgata tgttcgcctc gctgcgccgg 300
tggacggtgg gtctatcccga 322

<210> 249
<211> 278
<212> DNA
<213> Mycobacterium tuberculosis

<400> 249
cgcgttgaac tgaaggggtg ccgcccggct cgagcaggca agccatttgt tcgatgcggt 60
taccgaagat ctcttcggtg actgcccgc gccggccagc tcggctcagt gtccggcggt 120
ggtcgccgcg gcgacaatct tggcgccac ggtggtcggg gtcatgcccg cgagcaggat 180
tggcgagcgg ncggtcagcc ggggtgaactt cgtcaagagc tgacgctgcg gttggggagg 240
cgaatcatgg tcggtgcgta gcctcgacta ggcccggg 278

<210> 250
<211> 336
<212> DNA
<213> Mycobacterium tuberculosis

<400> 250
tgacaacgcg gcggcgatta ccccgctacc gcagcagcat gacgcggtag cgaacaccgc 60
cggatgcagc gcagggtgcgt cgatgtgctc acggaatcgc cccggcaccg cgatctcgag 120
gatcaccagt gccacccctt gcagcgcgac accgacgatt ccgtacaccg ccacgccgat 180
caggccctgg gccagctgat tggagctggc gtatatggcg gcgatggtga cgatggtcat 240
cgccctcttac attgtggcgg ccagaaccac ggcgttgggg cggcggtcga tgaacactag 300
gcgaccanat ccccggggtc aacaggttga ccatcc 336

<210> 251

<211> 95
<212> DNA
<213> Mycobacterium tuberculosis

<400> 251
cgcgacatc ccgaacgagg acacgcgacc gcttcgggtgt gtgatctatc agggctcgca 60
ccacgcgcaa ccgcttcggt ctacctagac gcggt 95

<210> 252
<211> 94
<212> DNA
<213> Mycobacterium tuberculosis

<400> 252
gcatgcgggt gatgccgttc tcagtgcgca acagcggttcg acgcggcata cccagccgca 60
catgccgtgc acgccggngc cggggcgagg atct 94

<210> 253
<211> 302
<212> DNA
<213> Mycobacterium tuberculosis

<400> 253
ctcaagcttc agncntcta agcgggtctgc gcggcgatcg caaagatcgc cctttgccgg 60
cgttgggggc ttctgctcgg ggggtgttgta caccttctcg aacacctcgg caccgacacc 120
accaccgtcg gcttgaacac cgccaacatc ggcagcanat cttgatgtcc tgggtgaatcc 180
acggtgactt tggagtggaa ggcgcccata ctgatcgcg gcgccaccac atgagctagc 240
ggcaggaaaa ccagcagccg ctcacccttg cgcagcagcg tcgggtgata tgcttggcgc 300
cc 302

<210> 254
<211> 291
<212> DNA
<213> Mycobacterium tuberculosis

<400> 254
agtccaangt cagtccggtc tcctctccga ctacggccaa gaactggggc gacgggtgtca 60
gtgcagaaca gcggaaactg gtggcgccct aggcgagcga acgctcaca acggcggtga 120
ccgcttctgg tcgtgcacca tcgagccgtg cccagcccgg ccgctgccc tcagccgcat 180
ccactggatg cccttctcgg cggtttcaat cangtacagg cgacgttcgc caccatcgtg 240
ccggggcacg gttagcgaga aacgccgact tcaccgattg cctcggtgat g 291

<210> 255
<211> 454
<212> DNA
<213> Mycobacterium tuberculosis

<400> 255
agcttcgcgg cgtggcgatc gcggttcaag gcgcgctctt cgagcacaac gagcgaagac 60
agctcggcga cggagccttt atcgacatcc gttcgggctg gctgaccggc ggcgaagaac 120
tgctggacgc gttgttgctg acggtgccgt ggcgagccga gcgccgtcag atgtncgacc 180
gggtggctga tgtgccgcgg ctggtgagtt ttcacgacct gaccatcgaa gatccgccgc 240
atccgcagct ggcgcgggatg cgccggcggc tcaacgacat ctacggcggc gaactgggtg 300

agcccttcac	caccgcgagg	ctgtgctaact	accgcgacgg	ctctgacagc	gtcgcctggc	360
atggcgacac	cattgggtcgc	ggcagcactg	aggacactat	ggtggcgatc	gtcagcctcg	420
gcgccacccg	cgtcttcgcg	ctgcggccgc	gtgg			454

<210> 256
 <211> 346
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 256						
agcttcagct	gatactcgac	cagccccact	cgggcccaata	cgtgaatgtc	tagcatcttc	60
acccgttcac	gggctantcg	agtagtagac	attgattagc	ctgaacgtac	ctccgacgcc	120
agctgacgaa	cgggtatgac	ggatggattt	cgtgggtgtcg	cgcccgaggt	caattcgtta	180
cggatgtatc	tcggggccgg	atcggggccg	atgttggcgg	ccgcggcggc	ctgggacgga	240
ctatccgacg	aactggcggg	ggcggcggtc	tggtttgggt	cggtgacctc	gggcctggcg	300
gatgcggcgt	ggcgcggccc	gcggcggttg	cgatggcncg	cgcggt		346

<210> 257
 <211> 339
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 257						
ctgggtcatgg	acgttgctcc	ggtagtggtt	cactgccgat	cctcctcggt	gagagtgccca	60
cctcagggtt	gggtagggtt	gggtactcga	aaccaagtta	cccaccagta	acaccgtcaa	120
aatatatccg	ttgcataggt	caatgcaagt	tgatgtgagc	tacattgcac	caactaacta	180
accaaccggt	tgggttagcg	gtgatacctg	cgtgtcggt	cctctcacct	gcggtgatag	240
cgatcaaatt	aagaatatgc	ggagtctagg	gcggcgagcg	ctggcancgt	agatcatcgg	300
ctcacgcgga	tgcggcctct	tggtacggac	atgcgcgcg			339

<210> 258
 <211> 182
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 258						
ctcgtgagta	gcacccctgt	aatttgggat	cggcaaaaag	gcgaatcacc	gcgtggccac	60
gacacgccgg	gagggacnat	ctcggggcgg	tagggcttct	cgcggaagg	cccgaacgta	120
cggcgtttca	acacgtcgcg	tcgccctcgc	accgcgaaca	ttcggggatg	gcagcaacct	180
gg						182

<210> 259
 <211> 213
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 259						
ggatcaacta	cgggccaacg	gtgattcttg	ggcgccgctg	acgcgcgaac	gacccagcga	60
cacattcagc	agatggccag	cgcggtgcgg	gccacgatgt	tggtgctcgg	cggctactcc	120
catggtgcgg	cncgtgatcg	acatcgtcac	cgccgcacca	ctgccggcct	cgggttcacg	180
cagccgttgc	cgccgcgagc	ggacgatcac	atc			213

<210> 260
<211> 321
<212> DNA
<213> Mycobacterium tuberculosis

<400> 260
aggaccgtca gcacggcgac gtgctactcg ccgagcagtg ggaatcgctc tgcagcaaac 60
cattactctg cgcgacgttc gagatgacct tctgaatgga cggatctacc tgccgcgcga 120
cgacctggac cgcgtatgcg tccgcctccg cctggacgac accggggcac tctatgaccc 180
cgacggacgg ctgcggttac tgcctgcggt caccgcccgc gcccgcacgg tacgcgtcgg 240
gactgcgctg agtccancct cgacgccgta gcgctgctgc tgtgcggcca tgtctggcat 300
ctaccgccgt cgctcccttg a 321

<210> 261
<211> 334
<212> DNA
<213> Mycobacterium tuberculosis

<400> 261
cgactctgtt ggccactgcg ggtcgatctt ggggccgccc cggtcgtgga acgcccaggt 60
caccggcgcg cgcaccgcgg tcagcgcgtc gttggccagc gtggtcacat ggaagtgggc 120
gacgacgagc ttggcggttg gcagcagccc gggcgtgcgg atcgccgagg cgtatgcagc 180
ggcggggtcg atggccaccg tactggatgc tctcccgaa ctgcggtgtg cgcgcttgca 240
gccatgccag caccgcccgc ccgcccgcgc cttcatgctg ccataaacc ctgataccgg 300
ccaggtcgac naaccngtat cccacggtca accc 334

<210> 262
<211> 208
<212> DNA
<213> Mycobacterium tuberculosis

<400> 262
cacacggacg gcggtgcgga cgcagctgac gcgcatggcg gtcagcatcg cggccgggtct 60
gctgttgat gcctacttcg cgccgcgcaa atgctgggtg gcggcggtgg tggcgctcgc 120
atggctgggc tgggtgctga cccaactctc gaaccacacc ggtgggtggg ctgggctatg 180
gcctgccata tcggcctggg gttctacn 208

<210> 263
<211> 233
<212> DNA
<213> Mycobacterium tuberculosis

<400> 263
ccgatatccg agccgatagc tggcgggctc ggggtggtngc cagcggcgct gcgacgaaag 60
tgtgaccgtc atgaaacaga caccaccggc ggccgtcggc cgtcgtcacc tgctcgagat 120
ctcagcatcc gcagccggtg tgatcgcgct ttcggcgtgt agtgggtcgc cgcccagacc 180
cggcaaacgc cggcccgcga caaccccgga acaggaagtc cggtcaccgc gcc 233

<210> 264
<211> 320
<212> DNA
<213> Mycobacterium tuberculosis

<400> 264
gcttcaggac aaattgnatc cctatgcacc cgttggtcacg ccgatgagtg aagactgcac 60
gcaatcgccg gaatccggca aaaccctgca caagcgaaat caaccggagg ctgacaaggc 120
aacgtcgggtg atccgtaccg cctgggttgga caaacggcag aaggcgctc gtccggtcca 180
tctacgccga gcacactggg gatagcgcca tcggcatcgg tgcggccacg gtggagacga 240
acgtccgng gcgtctgggt cagtaaccg cggaccagtt ctcgggcaag ctggtcaaca 300
tcgggcgcca cgtctccaac 320

<210> 265
<211> 304
<212> DNA
<213> Mycobacterium tuberculosis

<400> 265
gtttggcggc cttattgcac tgagggtcgtc aattgacca cagcggaaat gccgactatt 60
cgcaggcctc cttcgccttg gctgcccggag atgggctccg cgggaaccgc atgcaggtat 120
atgacctcgg tttctcgggt gctaccgcgt gccttgctga ggatgaactc ggcgttgga 180
ttgtccagcc ggccaattc atcgagcgca gattcgtaca catggccggc ggcgacatac 240
cttcaccgtg gatctgctcc acacggaccg ccctgtcggg atctgctcac gggtaaagga 300
atta 304

<210> 266
<211> 217
<212> DNA
<213> Mycobacterium tuberculosis

<400> 266
gcgcactcct cttatcgtc ccgctctgca tcgtcgcggc gcggtcaggt gcaaacgcct 60
tcgggggtgg gggctcctgcg gagcacaccg gatacggagc gcaacgcgtc gcgttgtgcg 120
ggcaaacaag tgtgcaggnn ccaatgccat gtccagcagc ttatcagtg cgaacgtgcg 180
aacgtcgcgc cttcgccggg gctgaatct ctacaag 217

<210> 267
<211> 174
<212> DNA
<213> Mycobacterium tuberculosis

<400> 267
cgctgaaagc caccattcgc gggtcggggc cggggtcgg gccgccaggc tgctccgctc 60
ggtgatggca cgccaccgcg acaccaccg gctgcgctac gtcgagccat accgggcgga 120
gctacatcgg ctcgcccgcc tagtggtcgg gncctcttcc gaggtcgagg tcga 174

<210> 268
<211> 144
<212> DNA
<213> Mycobacterium tuberculosis

<400> 268
tgtaatttgg gatgggcaaa aagcaaanca ccggtggcc acaaacgcgg ggagggacaa 60
tctcgggcg ctagggttc tcgcggaag ccgaaacgt acggcgttc aacacgtcgc 120
gtcgcctcgg acgcgaaatt cggg 144

<210> 269
<211> 216
<212> DNA
<213> Mycobacterium tuberculosis

<400> 269
cttgggcaac atgctgagga tcgccttttc accacgcggt cgggggtggcg ttgcattagc 60
tcaccgatgg tgcgcttggt gcaggccgcc gggatacccg agtgccggta aaccatcttg 120
tgctgcagtt tgtcccgtg atggcgacct tgtcgcgttg atcacgatga cgaagtcacc 180
gccatcgaca ttgggggcga actcggcttg tgcttg 216

<210> 270
<211> 199
<212> DNA
<213> Mycobacterium tuberculosis

<400> 270
gcatgcttca ttatctaata tccagccgtg gtttaatcag acgatcgaaa attcatgcag 60
acggtcceaa atagaaagac attctccagg caccagttga agaggttgat caatggtctg 120
ttcaaaaaca agttctcatc cggattgaac tttaccaact tcatccgttt catgtacaac 180
atTTTTtagaa ncatgcttc 199

<210> 271
<211> 230
<212> DNA
<213> Mycobacterium tuberculosis

<400> 271
atactcaage ttgatgccgc cgaaaccgag cgtgagcacg ccgccagcca ccacgcgcgg 60
gtcggggcgcc gggcccgggc cgccaggctg ctccgctcgg tgatggcacg ccaccgcgac 120
accaccgggc tgcgctacgt ctatccatac cgggcggagc tacatcggct cggccgcca 180
ttgttcnggc cctctttcga ggtcgaggtc tataccgatt tgcgcatccg 230

<210> 272
<211> 188
<212> DNA
<213> Mycobacterium tuberculosis

<400> 272
tccgtactgg tcgggtacgc ttcggtcgca gtgtgcgagt gatagatgac gaccgggacc 60
tcgtcggcat cttccatagc ccgccacacc ttcagttgct caccggaatc caaccggtag 120
aaggtcggcg agcgcctcggc attggtcatc gggatatgcc gctcgggacg gtcagaacct 180
cgggtccg 188

<210> 273
<211> 158
<212> DNA
<213> Mycobacterium tuberculosis

<400> 273
gttctcgcac gatttcggat tagcgggatg gtctcaattg ggtatgcggg gaaggcgctg 60
acattcgccg cgattagctg tttgatggac cgggggtgat ttttgatcac ggaaatgggt 120
gtttatncag gtcgcacgct ttcacccggg gcggaacg 158

<210> 274
<211> 237
<212> DNA
<213> Mycobacterium tuberculosis

<400> 274
gggtgtgcct gctgtgtatg cacggcatac ggacatcctt cccctgaaga cccgcgggtcg 60
aacagccacg tgtccatcat canggggtca accccggcca agggcgacgg cacgccaagt 120
tcgccgaccg ttaacctagt gctgttagct tcatttgctg cgagcaaaac agctgggtcg 180
ncgttaggaa tgaattgaaa ctcaaccgat ttggtgccgc cgtaggtgtc ctggctg 237

<210> 275
<211> 262
<212> DNA
<213> Mycobacterium tuberculosis

<400> 275
actaccgggc caacggtgat ntcttggccg ccgctgacng cgcgaacgac gccagcgacc 60
acattcagca gatggccagc gcgtgccggg ccacgangtt ggtgctcggc ggctactccc 120
anggtgcggn cgtgatcgac atcntaccg ccgcaccact gcccggcctc gggttcacca 180
gccgttgccg cccgcagcgg acgatcacat cgcttttatt tnntnttcng gaatccctcg 240
ggccgcgctg gcgggctgat ga 262

<210> 276
<211> 222
<212> DNA
<213> Mycobacterium tuberculosis

<400> 276
acgtcgggan actgttcgcg ttcatectcg tctcggcgga ttggtctgct gcgccggacc 60
gaccgatctt cagcgggggg tcacgctccg tggggtgccg ttacttccga tcgccagtg 120
tgccgctgct gtggctgatg ctgaacctca ccgcgttgan ttggatcggt tcgggatctg 180
gctggtggcc ggaacgcnat ttatgtcgct acgggcgccg gc 222

<210> 277
<211> 166
<212> DNA
<213> Mycobacterium tuberculosis

<400> 277
gtctaaaggc actactggca ccaaggccca cacgtcacct gtgactcctg cgccgacccg 60
cccaggtct ggccgttaca ccgaacgggc gagccgggag ttggtaccat cgaacaagac 120
aaggtgcatg ggcggagttg ttccgccact tcgtcgatga cgggtc 166

<210> 278
<211> 330
<212> DNA
<213> Mycobacterium tuberculosis

<400> 278
cgataccggc tgcttaccga gacatccacc atgccaccg aatcaccgca cgcgccgaaa 60

tcgcacaaca	gcttgacgcc	ttgcaggttc	cgcgattgga	attgccgacg	gtctctgacg	120
gcgtcgacct	tggcagcctc	tacgagctct	cggaatcact	tgcccagcag	gggggttcgat	180
gagtgtcaca	ccgaagacct	cgatatgggc	gcaatcctgg	ccgacacatc	caaccgggtg	240
gttgtgtgct	gcggcgccgg	tggggtcngc	aanacactac	cgcgggccgc	ctggcgttgc	300
gcgcggccga	atatggccgc	actgtggtcg				330

<210> 279
 <211> 332
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 279						
cgtcgctcgtc	gtggtatgcg	atagccatcc	cgtcggggcta	ctcgccatca	ccgatcagct	60
tcgccccgaa	gccgccgcgg	cgatttcgcg	tgcgaccaa	ctgaccgggg	ccaaaccggt	120
attgcttacc	ggcgacaacc	gggccaccgc	cgatcggctc	ggtgtacang	ttggcatcga	180
cgacgtacgg	gccgggctac	tgccgacgac	aangtcgcag	ccgtgcngcn	gctgcaagct	240
ggaggtgcc	gattgaccgt	ggtcggtgac	ggtatcaacg	acctccggcc	ttagcggccg	300
cgcatgtcgc	atcgccatgg	gcagcgcccc	ac			332

<210> 280
 <211> 222
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 280						
gcacgcaatc	gaagtcaccc	aaaccggggc	ggccaggcgt	ctnacgccac	gtcnaccagc	60
cgcaacctca	accgggccac	ggcgagctcc	tgatcaaggc	cgaggccatc	ggtgtctact	120
tcatcgacac	ctacttcgcg	tccgggcaat	atccgcgcga	actcccgttc	gtcatctgct	180
ccgaagtatg	cggcacggtg	gangccgtcg	gccagggggt	ac		222

<210> 281
 <211> 184
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 281						
tcgactgtgt	ggccacagat	cacgccccgc	atgccgagca	cgagaaatgc	gtcgaattcg	60
ccgcggggccg	gccggcatgc	tcgggttgca	gacggcattg	tcggtggtgg	tgcatacaat	120
ggtggcgccg	gcttgttgan	ttnggcgcga	tatcgcgccg	gtgatgagtg	anaaccggcg	180
tgca						184

<210> 282
 <211> 409
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 282						
gaacctgaca	ccctggtcac	gggtgagcac	ggacttgatt	tcttcnctat	tggtcggcgc	60
tggtgagcac	accacgccgc	tgacggccgt	cgcgctctcg	ctgtgctcgg	tctgggtggag	120
cgcgctgccc	gcggccnaac	atcntaaatc	aagcgatttc	gtcaacagat	atcatcaatg	180
tcggcgctgg	actattcaaa	tcatcgatat	actggtgacc	tggtccttcg	ccatcgatca	240
atggcgatag	tcacgcaa	cgtaacggac	atcgtcggcg	tcccagctgg	cccgtgccaa	300
cagatgctgc	aaccatcgg	ggtggtatca	ccgcgggtgt	cggcgatggt	ccacaattct	360

tgcggtccaa gccnnaaaca tcccgggcat gaattcaccg gcatgcgcn

409

<210> 283

<211> 413

<212> DNA

<213> Mycobacterium tuberculosis

<400> 283

ctatcgtacc	cgcgcgcggtc	accttctgga	tatcgccggc	ctggtcaagg	gggcgtccga	60
gggagccggg	ctgggtnaca	agttcctggc	tcatatccgc	gaatgcgacg	ccatttgtca	120
ggtggtgcgg	gtgttcgtcg	acgacgacgt	gactcatgtc	accggacggg	tcgatcccca	180
gtccgacatt	gaggtcgtcg	agaccgagct	gatactggca	gatctgcaa	ccctggagcg	240
ggccacgggc	cggctggaga	atgaagcgcg	caccaacaag	gcgcgcaagc	cggctctacga	300
agcggcactg	cgtgcccagc	angtgctcga	cgcggggcaa	gacgctgttc	gccgcggggg	360
tggatgccgc	cgcgttgccg	gactgaaact	gctgaccacc	aagcccttcc	tgt	413

<210> 284

<211> 283

<212> DNA

<213> Mycobacterium tuberculosis

<400> 284

tactcaagct	tcaggccgcc	acgtccgccc	tccgtcggcg	acgtgacctc	gagcgccgag	60
ttcgactcga	catcgccgcc	ggcgcatgcc	gacatgaacg	cggcactcac	cgcaagcccg	120
tcggacgtca	ggtcgatcga	ctccgcttca	agcaccggat	cgtccgggca	actcgcgggc	180
tcggcctgtg	cgaacggcac	accgctcggt	gcggcncccc	gcgcggaact	gggctcatca	240
cggtcgttgc	gagccggtcg	cgtcaccgcg	taccgacgcc	gtc		283

<210> 285

<211> 397

<212> DNA

<213> Mycobacterium tuberculosis

<400> 285

ccgacatcga	gtgggctcgc	agtgacttgg	cgacctccaa	gccaccggta	cccgcgcgcg	60
ggcaagccaa	ggacgacgac	ggccttgccg	gatagctgcg	ccaggcggtg	cgccaactgg	120
cgtccagcgt	cgccacgata	gtcaaagagc	ttcatctgcc	gagtgtgtcg	ccatctcatg	180
gctccaaata	tgggaattagg	tccttggggc	gactgacgac	agtccctcag	cgaccggatt	240
gcgcataccc	ccttgtacgc	tactccgcaa	atcccgggct	tgcgtccgcg	gaagcgaact	300
cggcggcgct	acgtggtggg	tcacttcggc	cgtgcgcact	cggatcgacg	ggccgatggg	360
ggccggggccc	gcgcgcttct	tggtcatccg	attgagt			397

<210> 286

<211> 342

<212> DNA

<213> Mycobacterium tuberculosis

<400> 286

atactcaagc	ttgtcgcggt	aaaccgcacg	cagggcggtg	ggtgcggtgt	caaagacacc	60
cacacttctt	tcgggttcgg	tgatctcgac	accggccgcg	agccgaccac	catgcgcgcg	120
tagatcggcg	atcagcgcgt	cggctatcgc	ctgggtgccc	cccaccggaa	tcggccagcc	180
gaccgaatgg	gccagcgttg	ccagcatcag	tccggcgccg	gccgacacca	gtgacggcaa	240
cggtgaaatc	gcgtggggcg	caacgcgcgt	gaacaacgcg	cgggcatact	cgcccgccaa	300

cgaccgccag gcaggggtgcc tgggcatca tccgcagccc ga

342

<210> 287

<211> 430

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 287

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tggactcata acgatcgggt cagcgacgcg ccaacacgaa cggccggacg agtgggccag 60
ggtcgcgcct cccctacaaa caggatccgt tgccctgcgag cgacaggctc cgggtgcggcg 120
ttgggcgcgcg tgctcgtccc agcgtccggt cccgggtcgc cggcgacgct tgtttcctcc 180
atactgcccc cctaattctcg aggcagcccc taccgcgagg caacctccca aaaatgcaat 240
cccccaaaat gcaatgcgtc gagctatttc tcacaccgac cgctagttgc ggatcagaaa 300
tccgttgggc gcggaagtcc agccgaattt gttctccgcg tccgcatcat gcttgtaatc 360
gtttggaaat catcctcata tgccctcgatc gcttcatagg tcaagcccaa acccggcagg 420
atgggtggcc                                     430
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<210> 288

<211> 473

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 288

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ctttacactt tatgcttccg gctcgtatgt tgtgtggaat tgtgagcgga taacaatttc 60
acacaggaaa cagctatgac catgattacg ccaagctatt taggtgacac tatagaatac 120
tcaagcttag tggttgcgca cgtaaattcg tcaggtgacc gatccccctgc tgtctcactc 180
gcctcacagc gaccaccacg gctggcgctc aaggcgggca cgtgcggagc agatgaggaa 240
tgtgcgacgt cttgatgcag cctgtcagaa caccgagacc ctgcacgaac ttacgatcga 300
aaccgcttag gccaaaccggg gacgggggtg tctttccgcg gctagggcgc cttatcgtcc 360
gaaggccgtg ggtggtgatc gccttctggg tcgcgcttgc gggctctgct gcgccgacgg 420
tgccgtccct ggaccgatct cccagcggca tccagtggcg attctgccat cgg 473
```

<210> 289

<211> 418

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 289

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caggcatgca agcttgcgat gtatcaacac gccgttgcg cgcgtgagcc gatagttgac 60
atccggctcg gtgaagggtga aatcgatggc caggtcgagg tcccatgcgc gtgggccatt 120
gatgctgac gccaggacgt caaagatttg gtccggcgct agctgggcga aaaacgtggg 180
cgccgggact tgcccgagc tgcccggtt cccgtcgcgc agctcggcgg ccccggtcag 240
aaagaaattg cgccaggctg cacactccgc gccgtaggcc agctgctcca cgggtgtcggc 300
atatagcccg cgggccgcag cgtgctcgct gtcggcgaac accgcatggt cgagaagcgt 360
tgccgcccaa cggaatcac tgcgtcaaag cttcgccggg ccaactccagc actccgtc 418
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<210> 290

<211> 194

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 290

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atactcaagc ttgaccgacg ctgatcgcac cgcacgcggg aacctcaagg gcactactgg 60
```

cacaagggcc cacacgtcaa cctgttaact cctgcgccga ccccggccga agtccttggc 120
gttaacaccg aacggggccaa cccgggaatt tgggttccat caaaacaaat agcaggtgcc 180
tgggcggagt gttc 194

<210> 291
<211> 166
<212> DNA
<213> Mycobacterium tuberculosis

<400> 291
gtcgtcgtgt gctggggcgt ccgtatcagc acgcccacga aatggggcac aagaaggatt 60
cctggaacgg tggctgtcca agatcacct cgcccaaac tgctacgggc acttctacat 120
cgagcacaac cgtggccatc acgtccgcgg tgtccacacc gggagg 166

<210> 292
<211> 291
<212> DNA
<213> Mycobacterium tuberculosis

<400> 292
atatgccttg ctgagctttt cggatcgcag cgagtcgtac ccgcgccggt caccttcgtg 60
gatatcgccg gcctgggtcaa gggggcgctc gagggagccg ggctgggtaa caagttcctg 120
gctcatatcc gcgaatgcga cgccatttgt caggtgggtgc ggggtgttcgt cgacaacgac 180
gtgactcatg tcaccggacg ggtcgatccc cagtccgaca ttgaggtcgt cgagaccgag 240
ctgatcctgg cagatctgca agccctggag cggggccacg ggcggctnga a 291

<210> 293
<211> 442
<212> DNA
<213> Mycobacterium tuberculosis

<400> 293
gacaccctgg tcacgggtga gcaggactcg atttcttcgc tattgggtcgg cgctgttgag 60
gcacagcacg ccgtgaggc cgtcgcgtcc tcgtgtgct cggctctggtg gagegcgctg 120
ccgcggccg aacatcgtaa atcaagcgta ttcgtcaaca gatatcatca atgtcggcgc 180
tggaactattc aaatcatcga tatactgggtg acctgggtcct tcgccatcga tcaatggcga 240
tagtcacgca gatcgtcacg gacatcgtct ggcgtccagc tggcccggtc caacagatgc 300
tgcaacccat cgggggtggt tcnccgcggg gctcggcgat ggtccaacaa ttcttgcggt 360
ccaagcccga aaccatccgg ccgatgagttc accggcatgg cgcaacggct ggtgccgggc 420
aaaacgcggc gcgatcgaat tc 442

<210> 294
<211> 150
<212> DNA
<213> Mycobacterium tuberculosis

<400> 294
tgtagaaggt ggggtcccgtc caacttcgcg ggggcggcgc gatatgcctt gctgggtcttg 60
ctcatttgat atccaatcta tgggtcgtgg ttactcaacg ggccgaagct ggccctccca 120
cgggtagggg cctattcgac ggtgatgtcc 150

<210> 295

<211> 321
<212> DNA
<213> Mycobacterium tuberculosis

<400> 295
cccgaatccg gtggccggca gggggcctgg cgacgtggac accttctaac ttgtctttac 60
cggtcactgt tgcaccccaa cacctttaac gacgtggacg gacgttacat cggattcgac 120
ggtgtcatcc acagcgttgc cattggggcac acccactacg ccaatttctc cgactgggac 180
acctaccgca gcctcgcccc actgcaggga ctgttggtcc cgcaacgggc catcgacatg 240
atccagtcgt tggtagccga cgcggagcag actggtgcgt atccgcgttg ggcgctggcg 300
aaattccgcc accggcatga t 321

<210> 296
<211> 184
<212> DNA
<213> Mycobacterium tuberculosis

<400> 296
ttgagatgct ggtcgggatg ccgatggttg gaacatggtc ccctggcgtc gaatacgcgc 60
gagcgcgatga gctcaccggt tcggaacaac gtatcgaaga actcgcaactg ctggcagatg 120
gtatctccga tgtggttgta atttgtatcc caactctaac tgtgctatcg gatctgcgtg 180
aata 184

<210> 297
<211> 259
<212> DNA
<213> Mycobacterium tuberculosis

<400> 297
cgtaatcacg atcccgtga gacacttgac cttacggccg aagtgacttc gctgctgcta 60
tgccgacacc cgatttccat acgctgctgt acacgacggc cgggcccgtg gcctccatca 120
cgctcaaccg cccggaacag ctcaacacca tcgtcccgcg catgcccgcg gagatcgagg 180
ccgctatcgg gttggtcgaa cgcgaccagg acatcaaggt catcntnctg cgcgggtggcg 240
ggcgcgcctt ctccggcgg 259

<210> 298
<211> 369
<212> DNA
<213> Mycobacterium tuberculosis

<400> 298
caagcttaag ctggttccgg ccaactccatg agccgtagtg caatggttcg tgcacggcga 60
ggccgaactt gccataaaca tccctgacga aagtctccgg caagccgatt gcttcttcgg 120
gcccgttctt gtggattgtc cgataaccgg gtccctcatg ctggaagttg tgcgcactct 180
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gtccgcccgg cttcagcacg cgggagatct cgtccagata gtgctccacg tccgngggga 300
aacatgtggg tgaacaccga ggtnagaaac accncatcca acgacgcacg cgggatatgg 360
aaagcgaaa 369

<210> 299
<211> 387
<212> DNA
<213> Mycobacterium tuberculosis

<400> 299
tattggtcttc gtcgaccagt acgtcgtagg cgccatgagc cagcgactga agccgcgcca 60
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ggcgcgcacg ctgtccgat cgcgtccgag ctcgctggcc agcgcacgca gccgctcgtc 180
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tgattcagca acaataccga tgcgctgcag caactttcgc agtccgatgc ggcccacctc 300
ccgtgcagtc actggctagc ccccgatcat ccggttgtgt cgatggcacg gcagcgggct 360
cgtaaacctg cggctctcagc tcgctgg 387

<210> 300
<211> 73
<212> DNA
<213> Mycobacterium tuberculosis

<400> 300
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tgcttacaca tct 73

<210> 301
<211> 156
<212> DNA
<213> Mycobacterium tuberculosis

<400> 301
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cgccctgcaa tggagttccc tttatggcct ctctagcctc ccgcttgatc ggctcgacct 120
gagagatgcc ctcgggcggt gcgggatctc cctcca 156

<210> 302
<211> 394
<212> DNA
<213> Mycobacterium tuberculosis

<400> 302
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tcgccgcggc gctgggcgat atcagctcac ccggtttcga ggtgttcggc gaccggacgg 120
tgctgcagac attcttgagc gtccctgacc ggcccgattc ggccttcaac atcgtgacgc 180
cgtatttcgg cggatccgct cggcgccgag tcgaaggcgg cctgagctaa agccgggcat 240
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gcgcgctgga ccggtatctg cgttcgctgg ggatcggggc naccgnant tgcgttgcca 360
netgattccg gtggagctcc aatctgactt ccgg 394

<210> 303
<211> 404
<212> DNA
<213> Mycobacterium tuberculosis

<400> 303
gcagctaccg accctagcga cgagtgtgtt cgcagcgctc aatgtgaacg ttcggcgtga 60
ttcggcgcg cgggttccgc tctcagcgca cgttcggcgc cgaggnggct agtccctggg 120
taagcaatgt ctcggtcgcc gccagcagcg cgcgtgtcgc caaccgctcn acccggttgc 180
gcatgtccgg taccgacgga aacgacggcg cgatccggat gttcttgtcg tccggatcct 240

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tacngtccgg	cgcgcgggtcc	cgggcaacac	gtcgaagctg	atgaantaac	cacccttggg	360
ctcgggtccaa	gangcgatct	tggactcctt	aaccgctgat	ncaa		404

<210> 304
 <211> 479
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 304						
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tcgacatctc	accgacgtgg	cacgggcgac	atcaacagga	agattgacga	atccctcgca	180
ggcgcggcac	gtccgcaggc	caacgccaa	tacggggcca	ccagcgatcc	tccgctcacg	240
caccagccca	agccaggctc	anccacccaa	gtcggcccgc	gctctccctc	gccccctggg	300
ctccggggcc	ttgttaaaca	actaccggaa	gtccaccaat	cctcgctgca	tctcgacacc	360
gtccgctca	ctcccttcct	cccgccctc	tccacacnac	acacctcttg	cattaaggtc	420
acggagcggt	cacttttcgt	cggacgaaat	tcgcaatccg	gccgctcgcc	gccagagat	479

<210> 305
 <211> 260
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 305						
cggaaagtgg	atactcccag	caggtagcag	gtcgccacca	cgtcggtcag	tgcgcgttca	60
gctcgtttgc	ggcgtcgcag	cagccagtc	gggaaatagc	tgccctggcg	cagcttgggg	120
atcgcgacgt	cgatggttgc	ggcacgggtg	tcgcaaata	cgggtggcgg	agccgttgcg	180
ctgattggac	cgtcctatgc	tgcgttcgcg	gtagcccgc	ccgcacaggg	cgtcggcttc	240
agcccccatc	aaggcggcga					260

<210> 306
 <211> 464
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 306						
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gcagcggctg	gcaacggcgc	cggatgatcac	cgagtgggtg	gnagttgccg	accggcagtt	120
cgcgcggggc	ttactacgag	aagggcctgc	gcgacgtcat	caggtatcac	gtgtcgatga	180
cgtcgagcgt	taacttcccc	gaccagacgg	cgacctcgcc	gatggacccc	gcgttgtacc	240
tgggtgtggg	gcaagctaac	gccgccgcan	gctatcggtg	ctcggtcgaa	gcgcagccgg	300
ggtcgcaagc	gctagcgggc	aaggctcgca	cgatctcggg	cacctggacc	aactacggcg	360
ctgctgccgc	caccgaatag	tgngtgcccg	gctaccggct	ggtggattcc	acgggacatg	420
tggttcggac	ctgccggcag	cggtggaact	gaagangctg	gtct		464

<210> 307
 <211> 315
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 307						
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tcgcgacacc	gtggcgccga	gcgcgcgtgc	cggcaggccg	attaggcggg	cagattagcc	120
cgccgcggct	cccggctccg	attacggcgc	cccgaatggc	gtcaccggct	ggtaaccacg	180
cttgcgcgcc	tgggcggcgg	cctgccggat	caggtgggtat	atgccgacaa	agcctgcgtg	240
atcggtcac	accaacggtg	acagcagccg	gttgtgcacc	atcgcnacg	ccaccccggt	300
ctccgggtct	gtcan					315

<210> 308
 <211> 331
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 308						
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gatcggcccc	ccgatggccg	cggccacggc	gtctgcctta	cccggcccg	ataccagcag	120
ccacacctcg	cggaacgct	gaatcgccgg	cagggccaag	gtgattcggc	gtggcgccgg	180
tttcgcgaat	cgtccaccgc	caccaccatg	cgggtgctct	cgaagacgcg	gggctgtgcg	240
ggaacagcga	gttaatgtgg	ccctcggggc	ccatgccag	caggtggacg	tcgaaattcg	300
gcccgggtca	cctggtgcg	cactggcggc	c			331

<210> 309
 <211> 286
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 309						
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ccgactacgg	ccaagaactg	ggcgacgggt	tcagtgcata	ccagcggana	ctggtggcgc	120
cctaggcgag	cgaccgcctc	acaaacggcg	gtgaccgcgt	tctggtcgtg	caccatcgag	180
ccgtgcccac	cccggcccg	tgccgtcagc	cgcattccact	ggatgccctt	ctcggcggtt	240
tcaatcaggt	acaggcgacg	ttcgccan	tcgtgccggg	gcangg		286

<210> 310
 <211> 331
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 310						
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agctggggct	ggccttcgcc	gccgatccgt	ctcagcagct	ggcgaagctg	tcgggggtgag	120
gaaattcgca	ggctcgtaaa	cggtgctgct	tacttggtca	ccaacgacta	ctaattgggat	180
ctgctgctgt	ccaagaccgg	ctggtcagan	gccgatgtga	tggcgagat	cgacctgcgg	240
gtgaccacat	tgggtcctaa	gggtgtcgat	ttggtagaac	ctgacgcacc	accatccacg	300
tcggcggttg	tccccgaaac	agccagaccg	a			331

<210> 311
 <211> 458
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 311						
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ccatgattac	gccaagctat	ttaggtgaca	ctatagaata	ctcaagcttg	atattgatca	120
tcattgatgat	catcaccoga	agtgtggtag	cgcagtggt	tatcgtgggt	accgtcgtgc	180

tttccatggg	cgectctttc	gggctttccg	tattggtctg	gcaggacatt	ctgggtatcg	240
agttgtactg	gatggtgttg	gcgatgtcgg	tgatcctgct	cctggcggtg	ggatccgact	300
acaatctgct	gctgatttcc	cggttgaaag	aggaaattgg	ggccggattg	aacaccggaa	360
ttatccgtgc	catggctggg	accgggggag	tggtgacggc	tgccggcatg	gtgttcgccg	420
ttaccatgtc	gttgtttgtg	ttcagcgatt	tgcaatt			458

<210> 312
 <211> 289
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 312						
caggcatgca	agcttggcgt	gccgttccaa	cccgaattgg	ctttcggcgc	catcgggtgag	60
gacggcgtgc	gggtgctcaa	cgacgacgtc	gtccgcggga	cacacctcga	tgctgccgcc	120
atggacgcgg	tcgaacgcaa	gcagctgata	gagctacaac	gccgcgcgga	acgtttccgc	180
cgcgggcgtg	accgcatccc	gttgaccggg	cggatcgcg	tgatcgtcga	tgacggcatc	240
gccaccggag	cgacggccaa	ggcggcgtgc	caggtcnccc	gggcgcacg		289

<210> 313
 <211> 154
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 313						
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ctgccagcac	attgcggcgc	tcctccctgg	aaagcaagat	aaccaagctc	atgccgtggt	120
tgtgggtggc	gtggtttggt	ttgggtaact	ttgg			154

<210> 314
 <211> 324
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 314						
tcggctaata	atcgtcgacg	ccggcctcct	ctgcaatcgc	cttggcggtc	gccggggttgt	60
caccggtgat	catcacggtg	cggatgctca	ttcggcgcgt	ttcgtcgaat	cgttcccgtg	120
tgcccacctt	gacgatgtcc	ttcagatgga	cgacgccgat	ggcccgcgcg	ctgctgttat	180
cggtccattc	cgcaacgact	aggggtgtcc	cccgcgggag	ctgatgccgt	cgacaatggc	240
accacctcc	tcggtggggg	gggcaccgtg	atcgcaacc	cacttcatca	ccgcagccgc	300
ggcaccttgc	ggattcgacg	gatg				324

<210> 315
 <211> 322
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 315						
ctcaagcttg	gagggcgtgg	gacgcgggtc	caaggcgcgc	tctccgagca	caacgagcga	60
agacngctcg	gcgacggagc	ctttatcgac	ntccgttcgg	gctggctgac	ggcggcnaaa	120
taatgctgga	ctcgttgttg	tcgacgggtc	cgtggcgagc	cgagcgccgt	cagatgtacg	180
accgggtggg	ctatgtgccg	cggttggtga	gtttccacga	cctgaccatc	gaagatccgc	240
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gtnatccctt	cnccaccgtc	gg				322

<210> 316
<211> 404
<212> DNA
<213> Mycobacterium tuberculosis

<400> 316
cctaggtcaa ccgtaccgtc atcggatcgg ggtcgaccgc acagatggac tggagcttcg 60
gcgaggtcat cgcctatgcc tcgcgggggg tgacgctgac cccgggtgac gtgttcggct 120
cgggcacggg gccacactgc acgtcgtcgc aagcacctca ggccaccgga aatcattccc 180
gggctggctg cactgactgc acgtgggtcac cctccaggtc gaagggtggt gcgagacgat 240
gcagaccgtc cggacgagcg gcaactccttt tccgttggct cttcggccga atccggacgc 300
cgaacccgac cggcgcgggg tcaacccggc accgacgcgg gtgccgttta cccgcgggct 360
gcacaaatcc cgacgggtat gggctttgac ctgccgacgg ggga 404

<210> 317
<211> 346
<212> DNA
<213> Mycobacterium tuberculosis

<400> 317
agcttggcgt gacaccaaca cagggcactt aagatggcaa tgcgccgcct acctgcacgt 60
tttcgcgatg tcagaggatg ccgaggggag aacaatgcga gcacggccgc tgacgttgct 120
caccgctttg gcggcgggtga cattgggtgt ggttgccggc tgcgaggccc gagtctaggc 180
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gccggtggag ctactgctgc gcgccatcac gccgcctagg gctccggcgg cgtcgccgaa 300
cgtcgggttt ggcgaactgc ctaccgggtt ccggcaggca accgat 346

<210> 318
<211> 333
<212> DNA
<213> Mycobacterium tuberculosis

<400> 318
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cggctcgtgt cgcgcaccgc gtgcggccaa cgcttgagca ccaccacgc gcagccctcg 120
ccgcgcacga atccatccgc gttggcgtcg aagctgttgc atcggccggg cgggtgacagc 180
gccgaccact tggacagcgc gatggcgggt aacgggtgaca aggtgagctg cccccgccc 240
gccaatgcc cgtcgggttc acgcaggcga agctctgaca cgccaagtga attgccacca 300
gcgacgacga acaagcggta tctacggcga tgg 333

<210> 319
<211> 207
<212> DNA
<213> Mycobacterium tuberculosis

<400> 319
gggtcgactt tctgcaaggc gaggtacac cgtcgtcgtc gtggtatgcg atagccatcc 60
cgtcgggcta ctgccatca ccgatcagct tcgccccgaa gccgccgtgg tgatttcgc 120
tgcgacaaa ctgaacggg ccaaacgggt attgcttacc ggcgacaacc gggccaccgc 180
cgatcggctc ggtgttcagg ttggcat 207

<210> 320
<211> 250
<212> DNA
<213> Mycobacterium tuberculosis

<400> 320
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caggacgcgg cgcaaacgta cttcggcatc aacgcgtccg acctgaattg gcagcaagcg 120
gcgctgctgg ccggcatggg gcaatctaac agcacgctct tcccgtacac caaccccgac 180
ggcgcgctgg cccgggcgga acgtggctct cgacaccatg atcgaaaaac cttcccgggg 240
aggcggatgc 250

<210> 321
<211> 365
<212> DNA
<213> Mycobacterium tuberculosis

<400> 321
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agcaggtcga agacgtcctg gacggtctgg gtaagaccat ggccgagctg aacagctcgc 180
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ccatcgctga tcggatcgac tacatcgtga gcctcggcga aacggtgatg tcaccgctgt 360
cggtc 365

<210> 322
<211> 413
<212> DNA
<213> Mycobacterium tuberculosis

<400> 322
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ccagcagctg gcacggaaaag atctgcgacg cgtgtttgga cggcgccgcg aagtggccgc 360
cgggtgtggc ctcgatgacc gactgtgggt cgggtgctcc gcgcgatcga tat 413

<210> 323
<211> 364
<212> DNA
<213> Mycobacterium tuberculosis

<400> 323
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cgatcgaccg cccaagccca catgaacaaa ccccggcacg acgttgccga tcggcatacc 360
gtga 364

<210> 324
<211> 488
<212> DNA
<213> Mycobacterium tuberculosis

<400> 324
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atgtgccggg anagccggtc cggttgccac gcaaaggcca tgtcttcgtc ggtccgacca 360
tcggtaccgg gacacggcgc tgtattgccc ggttcgctgc cgagttcgtc gcgcaactgc 420
acgcnggcgg gccagcgggtg ctcgttcanc ccggaggttc cggtgacgat gatcgtgttg 480
gtctccct 488

<210> 325
<211> 396
<212> DNA
<213> Mycobacterium tuberculosis

<400> 325
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cagcaccgct tgttgctgga aacctcctgg gaagccatgg aacacggcgg gctaacaccg 360
aaccatatgc ctcccgaan gggttttcgt ggggtt 396

<210> 326
<211> 394
<212> DNA
<213> Mycobacterium tuberculosis

<400> 326
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gccgagcgcc cgccacgat acgacgccat cgcgccttgg gccgcgtctt cgaccaccgc 300
caggttgtgg tgcgtggcga tcttcatgat cgcgtccatc tcgcaggcca cccggcatag 360
tgaacgggga ccatggcctc ggttcgcggg tgaa 394

<210> 327
<211> 140
<212> DNA
<213> Mycobacterium tuberculosis

<400> 327
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caatgggaag ttgttgcccg cttgactgtc cgggttaacg ccggaattcca ccacatcccc 120
ttgcgaaagg ccgttgggtt 140

<210> 328
<211> 242
<212> DNA
<213> Mycobacterium tuberculosis

<400> 328
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ggttcgcggc acggtcaacc tgccacacgc actggtaaga ctgcccgcgt cgcggtattc 120
gcggttgggtg aaaaggccga tgctgccgtt gccgcggggg ctgatgctgt cggatcgacg 180
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tt 242

<210> 329
<211> 220
<212> DNA
<213> Mycobacterium tuberculosis

<400> 329
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gtcggcggtt cgaaaccgaa ttactggacc acatgcgggc 220

<210> 330
<211> 328
<212> DNA
<213> Mycobacterium tuberculosis

<400> 330
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aaccgggata aggtcggcga agcgctcggc attggtcac gggatatgcc gctcgggacg 120
gtcagatgcc ctcggtccn gccagcactc ctcaggcttc gtcggggtgg tcgcgaccgc 180
atgggccaca tcgcattcac caggtctgcg cgaatcacca gcacgtanac ggttcctttc 240
ctaagcaaca ccgaaatttc aggaccgaa tgctccggga aaacatgtca cggtaagtcc 300
ggtattccgg gtaccggttg agcattga 328

<210> 331
<211> 366
<212> DNA
<213> Mycobacterium tuberculosis

<400> 331
cggcatcggg ttgggctgtc accagcagtt ggtagttctt cactactgtt gttcgagcgt 60
cgagccgccg cgcggtgtcga ggtcgccgga cgcgtaaccg ccaggccggg cagggtgccc 120
ttccagtcca cgcnctgtg gtcggctaac cgcttatctt caatcgagac natcgccagc 180
ttcatcgtgt tggcgatctt gtccgagggc acctcgaacc ggcgctgcga ntacagccac 240
gcgatcgtgt tgcccttcgc gtcgaccatc gtcgataccg caggcacttg cccctcgagc 300
agctgggccg atccgttggc aacgacctca gaggcacgat tggacatcag ccctagcccg 360
cctgcg 366

<210> 332

<211> 407
<212> DNA
<213> Mycobacterium tuberculosis

<400> 332
ccgtcgangc cgccgacttg gcttgaccga caccaacatg gcctgagggg gttcaacaag 60
accgtggccg acgggctgaa catcaccatg agcggcatga gccacgccac cgagttcatc 120
atgttgatcg ccgaaaacca ttggcgggta gcggaagaac ggtcgaggtg ctctacaccg 180
agtattcgaa gtcgaaaggc caaccgctgc tcaacggcgt caacatcatt ttcgacgggt 240
ttctgcgagg gaggatgccg cgatgaactg gatccagggt ctgttgatcg cgtcgatcat 300
cgggttgctg ttctacctgt tgcggtcgcg ccgaagcgcg cggtcggtgc ctgggtcaag 360
gtgggctatg tcttgttcgt gtcgccggca tctatgccgt gctgaga 407

<210> 333
<211> 473
<212> DNA
<213> Mycobacterium tuberculosis

<400> 333
ttacacgncc tgcttcgggc tcgtatgttg tgtggaattg tgagcggata acaatttcac 60
acaggaaaca gctatgacca tgattacgcc aagctattta ggtgacacta tagaatactc 120
aagctttttg agcgtcgcg cgggcagctt cgccggcaat tctactagcg agaagtctgg 180
cccgatncgg atctgaccga agtcgctgcg gtgcagccca ccctcattgg cgatggcgcc 240
gacnatggcg cctggaccga tcttggtgcc cttgccgacg gngacgcggg angtggtcaa 300
gtccgggtcta cncctggggc tttgcgagcg gtcccgacgc tggtcgcggg tgcgcccgcg 360
aaagcggcg gtcgggtgcc atcaggaatg cctcaccgcc gcggcactgn acggccagtg 420
ccgcggcgat gtcngccatc gggacatcat gctcgcgttc atactcctcg acc 473

<210> 334
<211> 305
<212> DNA
<213> Mycobacterium tuberculosis

<400> 334
caggcatgca agctttgtca caccaagtgt ttcgaccagg cgctccatcc ggcgagtggg 60
tactcccagc aggtagcagg tcgccaccac gctggtcagt gcgcgttcag ctgcgttgcg 120
gcgctgcagc agccagtccg ggaaatagct gccctggcgc agcttgggga tcgcgacgtc 180
gatggttgcg gcacgggtgt cgaaatcacg gtggcggtag ccgttgcgct gattggaccg 240
ctcatcgctg cgttcgcggt agcccgcgcc gcacagggcg tcggcttcag ccccatcaa 300
ggcgg 305

<210> 335
<211> 432
<212> DNA
<213> Mycobacterium tuberculosis

<400> 335
agcttagcca gtttttctac tcttgggccc acaccacag tgcttcgacg gtacggtcac 60
ccatgatggc catccagttg gcatcggtga gctgataaat gccagctggt ttcgccaacc 120
cggtagcgat cttggcgcg cgttggttgt cactgatacc tatcgagcaa gacagcccgg 180
tttgcgacaa gatgactttt cggatctctt cggcgacttc gatgggggtc tcgggagtcc 240
cgggcgccac cgcgaggtaa gcctcgtccc agcccatac ctcgaccggg tatccaggt 300
cgcgcaataa cgccaccacc tcctcggacg ccgcgttgta ggcggtggg ttcgacggca 360
agaagtggcc tcagggcatc gtggcgcgcg tcccacggc ntgcggcgcg gcacaccgta 420

ggcgcggggc tc

432

<210> 336

<211> 429

<212> DNA

<213> Mycobacterium tuberculosis

<400> 336

```
ccggcggaac tcagacgtgc tgggtggtgcg gcatggcacc gcgggcagca aagcgcaactt 60
ctccggggac gacagcaagc gaccgctaga caagaggggt cgtgcgcagg cagaagcgtt 120
ggtaccacag ctgctggcgt tcggcgccac cgatgtttat gccgccgacc ggggtgcgtg 180
ccaccagacg atggagccac tcggcgcgga actgaacgtg accatacaca acgagcccac 240
cctgaccgaa gagtccctacg ccaacaaccc caaacgcggc cgacaccgag tgctgcagat 300
cgtcgagcaa gtaggcacac ccgtgatctg cacgcagggc aaggtcattc ccgatctgat 360
cacgtggtgg tgcgagcgcg accgtgtgcc cccgacagtc ccgcaatcgc aaaggcagca 420
cgttggtgt
```

<210> 337

<211> 94

<212> DNA

<213> Mycobacterium tuberculosis

<400> 337

```
gtatggtcag ctgtccatcc ggcgctgtcg gccgagctgc cagatctcgt cagccgtaac 60
cgggttgctg gatccacgcg tgcgggttgt ctac 94
```

<210> 338

<211> 351

<212> DNA

<213> Mycobacterium tuberculosis

<400> 338

```
ccgactttcc gcggggtaccc gctcaacttt gtgtcnacct caacgccatt gccggcacct 60
actacgtgca ctccaactac ttcatactga cgccggaaca aattgacgca gcggttcgcg 120
tgaccaatac ggtcgggtccc acgatgaccc agtactacat cattcgcacg gagaacctgc 180
cgctgctaga gccactgcca tcggtgccga tcgtggggaa cccactggcg aacctgggtc 240
aaccaaactt gaaggtgatt gttaacctgg gctacgcgac ccggcctatg gttattcgac 300
ctcgccgccc aatgttgcca ctccgttcgg ttgttcaga angtcagccc g 351
```

<210> 339

<211> 152

<212> DNA

<213> Mycobacterium tuberculosis

<400> 339

```
gcaccgatgt cggcgagcac ttcgtcaact tccaggggtg cccgcaccaa gtatttcgac 60
gagtatttcc gtcggggccgc cgccgcccgt gcgcggcagg tggatcatct ggcggcgggg 120
ctgggactcg cgcgcgtacc ggctgcctcg gc 152
```

<210> 340

<211> 263

<212> DNA

<213> Mycobacterium tuberculosis

<400> 340

```
tgcacccaac ttactgagca tgctaacgct ggtcgtgcgg gtcttggtcc cgcgtgtcgg 60
cagggcacac gctcggggcg tagctgggag agggcccggt caagcccgga gagcagtgct 120
cagtcgcgca gcttgaccga ctttcgatga gaacgcgctt ctgcgcgtat tgaactggcg 180
tgctgacggt cgctgagcag cgctcgccga gtgcggccgc tgattctttc atcgagccag 240
gacgcgcatt cgtgttcggc cgc                                     263
```

<210> 341

<211> 249

<212> DNA

<213> Mycobacterium tuberculosis

<400> 341

```
agcttacggc cggctcgacgc gacgagtggg tcatgacacc acaaaccgtc aacgcctact 60
acaacccggg gatgaacgaa atcgtcttcc cgcagcgatt ttacagccac catttttcga 120
tccgcaggcc gacgaggccg ccaactacgg cgggatcggg gcgcgtgatc gggcacgatg 180
atcgggcacg gtttcgacga tagggcgcca aatacgangg cgacgcaatc tggtnattg 240
gtggatcga                                     249
```

<210> 342

<211> 269

<212> DNA

<213> Mycobacterium tuberculosis

<400> 342

```
atgtcgtcac gtcaccacaa tcgcgaggac ccaatcatgc cgcccagggc ggccaacca 60
atggtggccg cgaagcggca gctcgatcgc agcgcggagg tgccggccgc cagttgattc 120
acgaacaggg tgaggtcata ggcgggcagg atagtgcga acgcaagacc tatactctgc 180
gtcggagtaa gaatcgagta gccggtcgac caacggaagc gaaagtgtcc gcgatgttga 240
tgagcgtcgc cggttgtggc ggcgggtggc                                     269
```

<210> 343

<211> 336

<212> DNA

<213> Mycobacterium tuberculosis

<400> 343

```
agcttcacca gcgtgccgat gctgttcgcn acacctccct actatgcgca attcgccgac 60
acgggtggca tcaacacggg cgataagggt gacatcgctg ggggtgaacgt cgggctggtg 120
cgctcgctgg caatccgcgg caaccgcgtg ttgatcggat tctcgttgcc cggcaagaca 180
atcgggatgc aaagccgggc agcaattcgc accgacacca ttcttgggcg taagaacctg 240
gaaatcgaac cccgcggttc ggagccgttg aaacccaacg gtttcctgcc gttggcgag 300
aacactacgc catacctaat ctatgacgcy ttcgtc                                     336
```

<210> 344

<211> 417

<212> DNA

<213> Mycobacterium tuberculosis

<400> 344

```
ctgccgcggt ggcgggtcagc gcctggcaag tcaccgcacc gccgtccggt tcacggcag 60
```

```

gctccccga aaagggccct ggcaacagaa ggtgatcaat gagctcccgc agaccttcgc 120
cgatctggga cgcacatacg tgaagttcgg ccagatcatc gcgtccagcc cgggagcatt 180
cggtgagtcg ctgtcgcggg gaattccgcg gcctgctcga ccgggtgccg cccgcaaaaa 240
ccgacgaggt gcacaagctc ttcgctcgagg aactcggcga cgagccggcc cggctgttcg 300
cctccttcga ggaagaaccg ttcgcgctctg cgtccatcgc ccaagtgcac tacgcgacct 360
gcgcagcggc gaagaagtgt ggtcaagatc cacggccggg catccgccgc cgcgttt 417

```

<210> 345

<211> 405

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 345

```

gatcgtgccg gccccccggc ggcagtagca gatcagctcg tcgaaatcgc ggcaaccagt 60
ccagtcgatt tccatacggg cgccgtcaat caactctgcg aacatcgcga tcggcacccg 120
aaaccggcga gccgcgtcag ccagcgcaac cagcacccgg atcggatgaa tcatcaatat 180
tatcaagtga tttcctgatg gcatcgagct cggtgatctt ggtctcgggg gccagctcgc 240
cgtcggcgac gtcgtcgatc cggcgggcga gcgcatagac cgcaaatagt gccgctcgct 300
tttcgcgcgg caagagtcgg atgccgtaat atangtttct ggcgggccgtg cgcgtgaten 360
actcgggtgat tcgatacgcc tgttcatctc ggtcatgcg tctc 405

```

<210> 346

<211> 414

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 346

```

ggtggcgcaa tgaccgaaac cccccagcc ccgcaaacc cggcgggccc ggccggggccc 60
gcacaatcgt tcgtgttgga gcgggccatc cagaccgttg ggcgccgtaa ggaggccgtg 120
gtacgagtcg ggctggtgcc cggcacccgc aagttcgacc tcaacggccg cagcttgag 180
gactacttcc caaacaaggc gcaccagcag ttgatcaagg caccctggc caccgtggat 240
cgggtgga aa gtttcgacat ctttgccac ctggggcgcg gcggcccgtc gggtcattggc 300
cggcgcgctg cgcttggtta tcgcccgggc attgattctn gtatcgccg atgaccggcc 360
cgcgtgaat aangccggct tcttgaccgt gatccacgcg ccaccgaacg caaa 414

```

<210> 347

<211> 331

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 347

```

cacaatagat tactcaagct tcgaaccage ggccttatca cgtatccccg ctgagacctt 60
gacccttagg gccgaagtga cttcgctgct gctatgccga caccgattt ccagacgctg 120
ctgttacacg acggccgggc cggtgggcac catcacgctc aaccgcccgg aacagctcaa 180
caccatcgtc ccgccatgc ccgacgagat cgaggccgct atcgggttgg ccgagcgcga 240
ccaggacatc aaggtcatcg tgctgcgcgg tgccggccgc gccttctccg gcggttacia 300
cttcggcggc gggttccaac attgggggca t 331

```

<210> 348

<211> 386

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 348
 tcaggacgct tatggttggc agatgggtcg cctggcgctg aatacgcgcg agcgcatgag 60
 ctccaccggtt cggaacaacg tatcgaagaa cgtcgccactg ctggcagatg gtatctccga 120
 tgtggttgta atttgtatcc caactctaac tgtgctatcg gatcagcgtg aatatcgaga 180
 tattgcgaat gcgatgacag gccgccattc ggtttattcg cttacgcttc ccgggttcga 240
 ttcgtctgat gcaactgccg aaaacgcgga tatgattgtt gaaaccgtat ctaacgcaat 300
 tattgatgtg gtaggcggca gctgccgttt tgtgctgtcg ggctattcat cgggtggggg 360
 tgtttggtc tgccctctgc tcccat 386

<210> 349
 <211> 187
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 349
 cgcagctgtc gccgatctgg tccggaatac ctagctccag gttctgagtg gagatgagtg 60
 cggccatcga agtggtgtca atgtactcca ggatgtcagg tgccaggccg ctggcgagga 120
 tcttgggcac cgccgccatg acttggtcga agtcggcgaa cggggcgagc acgctggcgt 180
 cgtggtc 187

<210> 350
 <211> 241
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 350
 gtagttcggt catccaaaca cagtgcggta ccggctcaag cggatcacccg acttcaccgg 60
 gcgcgatccc acccagccac gcgatgccta tgctcttcgg gtggcgggca ccgtgggtca 120
 actcaactat ccgacgcgcg actgaagcat cgacagcaat gccgtgtcat agattccctc 180
 gccggtcaga ggggggtccag cagggggccc ggaaaagata ccaggggcgc cgtcggaccg 240
 a 241

<210> 351
 <211> 335
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 351
 tccgctcgct tctccgagag gttgagtgcc aacgctctgc cgatgcccgag agccggcccc 60
 ggtgatgacg gcgaccttgc cttcgaatga gctcatttga ctactccccg tgggtgtccc 120
 tgcgattggt ggaggtggcc gcgcagcctt gccccgaggt cggcgatcgc gtctcgggct 180
 tcggggagca gactgacctg cagatggaag tcgtgccaca tgcccgcgaa ccggcgatgc 240
 tcgatgcttg ttttcgaagc ggcgaggcg gtttcgatct tgtccgcgtc aacacngatc 300
 ggatcgtcgc ccgcggtctg catgacgaat gggcg 335

<210> 352
 <211> 441
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 352
 atgggaggcc accgattacc atcttgcaac caccgattcc gggctattga tgtccacgtt 60
 cgggtccgcga accgcgctgt ggctgctgct ggccaaaggc ggaggcgata ccgaagtcag 120

tgcccaagct	tgggttccac	gctcgcgcag	ccacgccgtc	acctttccac	gagacctcac	180
ctgccgatcc	gaaatggaat	cggccgtgac	ggaattggcg	cagcgaacac	tcaacgaggt	240
ggtggcttcg	tcgcgaaccg	tcacccgagt	cgcggtcacc	gtgcgcacgg	cgacgttcta	300
caccgcgacc	aagatccgaa	agctgcaagc	tcccagcacc	gatcccgcg	tcatcaccgc	360
tgccgcccgg	cacgttcttg	aacctattcg	agctggaatc	ggccgtccgg	ttgctgggaa	420
ttgcngttaa	gaactgggcc	t				441

<210> 353

<211> 332

<212> DNA

<213> Mycobacterium tuberculosis

<400> 353

gctttgcgcg	cttctccgag	aggttggagt	gccaacgcgc	tgccgatgcc	cgagccggcc	60
ccggtgatga	cggcgacctt	gccttcgaat	gagctcattt	gactactccc	cgtggttgtc	120
cctgcgattg	gtggagggtg	ccgcgcagcc	ttgccccgag	gtcggcgatc	gcgtcgcggg	180
cttcggggag	caaaactgacc	tgcagatgga	agtcgtgcca	catgcccgcg	aaccggcgat	240
gctcgatgct	tgttttcgaa	gcggcgcagg	cggttcgatc	ttgtccgcgt	caacgcagat	300
cggatcgtcg	cccgcgggtc	tgcatgaaga	at			332

<210> 354

<211> 334

<212> DNA

<213> Mycobacterium tuberculosis

<400> 354

ctcacgcagc	cacgccgtca	cctttccacg	aagacctcac	ctgccgatcc	gaaatggaat	60
cggccgtgac	ggaaattggc	gcagcgaaac	actcaacgag	gtggtggctt	cgtcgcgaac	120
cgtcacccga	gtcgcgggtca	ccgtgcgcac	ggcgacgttc	tacaccgcga	ccaacatccg	180
aaagctgcaa	gctcccagca	ccgatcccga	cgatcatcacc	gctgccgccc	ggcacgttct	240
tgacctattc	gagctggatc	ggcccgtccg	gttgctggga	gtgcgggttag	aaactggcct	300
agaaaccggc	gggcacaccg	cacctgggcg	gggn			334

<210> 355

<211> 341

<212> DNA

<213> Mycobacterium tuberculosis

<400> 355

tgcttccggc	tcgtatgttg	tgtggaattg	tgagcggata	acaatttcac	acaggaaaca	60
gctatgacca	tgattacgcc	aagctattta	ggtgacacta	tagaatactc	aagcttgatg	120
ccgccgaaac	cgagcgtgag	cacgccgccca	gccaccacnc	gcgggtcggg	cgccgggccc	180
gggtcgccan	gctgctccgc	tcggtgatgg	cacgccaccg	cgacaccacc	cggtgcgct	240
acgtcgagcc	ataccggggc	gagctacatc	ggctcggccg	cccagtgttc	gggcctctt	300
tcgaagtcga	agtcgatacc	gattgcgcac	ccgncgccgc	a		341

<210> 356

<211> 259

<212> DNA

<213> Mycobacterium tuberculosis

<400> 356

caggcatgca	agcttcacgt	ccgtacggct	cgggtacgct	tcggtcgcag	tgtgcgagtg	60
------------	------------	------------	------------	------------	------------	----

atagatgacg	accgggacct	cgtctgcac	ttccatagcc	cgccacacct	tcagttgctc	120
accggaatcc	aaccggtaga	aggtcggcga	gcgctcggca	ttggatcatc	ggatattgcc	180
ctcgggacgg	tcagaaccct	cggttcggc	cagcactccg	caggcttcgt	cggggtgggc	240
gcgacgcgca	tgggccacc					259

<210> 357
 <211> 349
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 357						
gcttgtctat	cgtcccggcc	aggtcggcc	agtcaaggtc	gaaggccagt	ccggtctcct	60
ctccgactac	ggccaagaac	tgggcgacgg	tgtcagtgc	gaccagcgg	aactgggtggc	120
gccctaggcg	agcgaccgcc	tcacaaacgg	cggtgaccgc	gttctggtcg	tgcaccatcg	180
agccgtgccc	agcccgccg	cgtgccgtca	gccgcatcca	ctggatgccc	ttctcggcgg	240
tttcaatcag	gtacaggcga	cgttcgccac	catcgtgccg	gggcacgggt	agcgagaaac	300
cgccgacttc	acgattgcct	cggtgatgcc	gtcgaaacag	atcgggcct		349

<210> 358
 <211> 325
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 358						
gcgcgccatg	ttgaggttgt	ccgacggtga	cgacggtgaa	ccacaactgt	ttgacctgtc	60
cgcacacacc	gtgtggatcg	gcgagcggac	ccgacaaatc	gatggcgcg	acatcgcggt	120
tgccaggtg	attgctaate	cggtcgggg	caagttgggc	cccaacatga	ccccggaact	180
ggccgtggag	tacgtcgagc	ggctcgaccc	gcacaataag	ccgggccggc	tgacttggtg	240
agcaggatgg	gcaaccacaa	ggtccgcgat	ctgttgccac	cgatcgtgga	gaacgtccat	300
gccaccgggc	atcaggtcat	ctggc				325

<210> 359
 <211> 191
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 359						
ttgccttcca	tgccgagcaa	ggctgactca	gcgatgacga	attgttcttc	ttcgcggggtg	60
ttgctgctgg	ttgcgggcta	tgagagcact	gctcatatga	ttagcacatt	gtttctgacg	120
ctggccgact	atccagatca	gctgacactc	cttgccgcgc	aaccagacct	gatcccgcgc	180
gcgatcgagg	a					191

<210> 360
 <211> 74
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 360						
cgacgtgagg	cccaactgcg	accaccaggt	cctggatatg	caggacatgg	ccgggttcag	60
cggcgccaat	accg					74

<210> 361

<211> 312
<212> DNA
<213> Mycobacterium tuberculosis

<400> 361
taacgactcg ggtccagcga ccgcgcacaac acnaacggcc ggacnacgtg ggccagggtc 60
gcggcctccc ctacaaacag gatccgttgc ctgcgaacga caggctccgg tgcggcggtg 120
ggcgccgtgc tcgtcccagc gtccgggtccc gggtcgcccg cgacgcttgt ttctccata 180
ctcgccccct aatctcgagg cagcccgtac ccgcaggcaa cctcccaaaa atgcaatccc 240
ccaaaatgca atgcgtcnag ctattttctca caccgaccgc tagttgcgga tcanaaatcc 300
gttgggcgcg ga 312

<210> 362
<211> 335
<212> DNA
<213> Mycobacterium tuberculosis

<400> 362
cntggcgggtg ggtgcgggtgt cgaacacgac cacacttctt tgcgggttcgg tgatctcgac 60
accggccgcg agccgaccac catgcgcgcg tagatcggcg atcagcgcgt cggctatcgc 120
ctgggtgccg cccaccggaa tcggccagcc gaccgaatgg gccagcgttg ccatcatcag 180
tccggcgccc gccgacacca gtgacggcaa cggtgaaatc ncgtgggcgg caacgccggg 240
gaacaacgcg cgggcatcct cgcccgccag cgaccgccag gcaggggtgc cctgggccag 300
catccgcagc ccgagacnca ggaccgancc cagtg 335

<210> 363
<211> 386
<212> DNA
<213> Mycobacterium tuberculosis

<400> 363
gcttttcnga tcgcagcgag tcgtaccgcg gccggtcacc ttctgtggata tcgccggcct 60
ggtcaagggg gcgtccgagg gagccgggct gggtaacaag ttcttggtc ataccgcga 120
atgnacgcc atttgtcagg tggcggggt gttcgtcaac aacnacttga ctcatgtcac 180
cggacgggtc gatcccant ccgacattga ggtcgtcgan accgagctga tcttggcana 240
tctgcaaacc ctggagcggg ccacggggcg gctggagaag gaancgcgca ccaacaaggc 300
gcgcaagccg gtctacgacg cggcactgcg tgcccagcag gtgctcgacg ccggcaanac 360
gctgttcgcc gcgggggtgg atgccg 386

<210> 364
<211> 386
<212> DNA
<213> Mycobacterium tuberculosis

<400> 364
gtcgtacgcc attngtcggt gtgcgcatac cagtacgacg cgccggggcac ctgacgcggc 60
ggccgcgacc agtcggtggc catcgccatc gtctgccacc cggtaacgg acgcaccttc 120
tcctggccga cgtagtgcgc ccaccggccg ccgttgcgtc ccatcnatcc ggtcaacatg 180
agcagcgcca acaccgagcg gtacatgaca tcgctgtgga accagtgaca gattccgccc 240
cccatgatga tcatcgaccg tcctccggat tcggtcgcgt tgcgggcgaa attccttggc 300
aaaccggatt gcctgcgcgg ccggcacacc ggtgatcgac tcctgccagg ccgggggtgtt 360
ctgctggggt ccggtcgtggt accggt 386

<210> 365
<211> 335
<212> DNA
<213> Mycobacterium tuberculosis

<400> 365
gcgaggcggg atcgcttccc gtcgtaccgg cgaccgccag ccgagaagct cgttttccca 60
gtgttgctgg ggattctcac gctgctgctg antgctgcc anaccgcttc cgcttcgggt 120
tacaacgagc cgcggggcta cgatcgtgcg acgctgaant tgggtgttctc catggacttg 180
gggatgtgcc tgaaccgggt cacctacnac tccaagctgg cgccgtctcg tccgcaggtc 240
gttgcttgcg atagccggga ggcccggatc cgcaatgacg gattccatgc caacgctccg 300
agttgcatgc ggatcgaata cnaattgatc accca 335

<210> 366
<211> 396
<212> DNA
<213> Mycobacterium tuberculosis

<400> 366
tgggtcttgc cggcgagccc agcgaagtcg ctagcgtggc cgtgtttctt ggcttcggat 60
ctatcctcgt tacatgaccg gcaccgtgtt ggacgtgact ggcggccggg tcatatgaca 120
ccgagatcat tgccacggta cggcaattcg tcaagaagga aatctttccc natgcaccgg 180
ccctcgaacg tggcaacagc taccgcgaag aaatcgtcga tcggctgggt gttattggct 240
tgctcggtcg ccggctgcaa gggtatcgac accaccgagt tcattctcgg gcgtgccggc 300
gcattcgagc tggcggtgcg cgctgcccg caccgtcata agtacttgan gatgggtcaaa 360
cgtcggacga accgccacca cgtcgctgcc gaacgg 396

<210> 367
<211> 262
<212> DNA
<213> Mycobacterium tuberculosis

<400> 367
tagatgccc aagcttgccnt tanagacctc gtcgaccaag cacggacgcg accgtcgaag 60
gtggcgaatc cgggcttggc gtcnaccgc gtaaggcaga ccagatggtt cgcggcacgg 120
tcaacctgcc acacggcact ggtaagactg cccgcgtcgc ggtattcgcg gttgggtgaaa 180
aggccgatgc tgccgttgcc gcgggggcg atgttgctcg gagtgacgat ctgatcgaga 240
ggattcaggg cggctggctg ga 262

<210> 368
<211> 303
<212> DNA
<213> Mycobacterium tuberculosis

<400> 368
tctccacggc gtggatcaag gtaccggccg ggatgttgcg caatggcagg ttgttgcccg 60
gcttgatgtc tgcgttagcg ccggattcca ccacatcccc ttgcgaaaag tccgttgggt 120
gcaatgatgt agcgcttctc cccatcgaga tagtgagca acgcaatccg tgcggtacgg 180
ttcgggtcgt actcgatgtg cgcgaccttg gcgttgacac catctttgtc attgcggcga 240
aagtcgatca tccggtaagc gcgcttatga ccgccgcctt tgtgccgggt nggtaatccg 300
gcc 303

<210> 369

<211> 367
<212> DNA
<213> Mycobacterium tuberculosis

<400> 369
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atcggcgtcg gcgcgcgacaa gatgtgggat atccgcaatc ggggcggtcat ccctgcgggc 120
gcgctcccc gcgtccgagc cttcgtcgac gcaatcgagg caagtcacga cgcggatgag 180
gggcagcagt gaattacagc gaggtcgagc tgttgagtcg cgctcatcaa ctgttcgccg 240
gaaacagtcg gcgaccgggg ttggatgcgg gcaccacacc ctacggggga tctgctgtct 300
cgggctgccg acctgaatgt nggtgcgggc ancgcggta tcnactcccg tggaacacag 360
ccggggc 367

<210> 370
<211> 366
<212> DNA
<213> Mycobacterium tuberculosis

<400> 370
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caacagctca tagcgatcca accagtangc aaccgccttc agcagtacaa ccgcgccggc 120
gaacactgcg agttgaacgc gagctgcctg ggtcagcatg cctctgccgg ttgtcagccg 180
aaggccgccg aacaggtaat gcgtcaacag gctcgctaga aacgccagaa ccacggccac 240
gaacagccag ttcagcaccg accggtagaa cggcagatcg aagacgaaaa aacccaatgt 300
catagccgaa ttcgggggtcc acgatgcaa aggtgcccc gtgtacaaca actgaacctt 360
caccca 366

<210> 371
<211> 455
<212> DNA
<213> Mycobacterium tuberculosis

<400> 371
tccggctcgt atgttggtg gaattgtgag cggataacaa tttcacacag gaaacagcta 60
tgaccatgat tacgccaagc tatttaggtg aactataga atactcaagc ttcacgtccg 120
tacggctcgg gtacgcttcg gtcgcagtg gcgagtata gatgacgacc gggacctcgt 180
cggcatcttc catagcccgc cacaccttca gttgctcacc ggaatccaac cggtagaagg 240
tcggcgagcg ctcggcattg gtcacgggga tatgccgctc gggacgggtca gagccctcgg 300
gtccggccag cactccgcag gcttcgtcgg ggtggtcgag acgcgcatgg gccaccatcg 360
cattcaccag gtctgcgcga atcaccagca cgtagacggt tcctttccta agcaacaccg 420
aagtttcagg accgaatgct ccgggaaaca tgtca 455

<210> 372
<211> 196
<212> DNA
<213> Mycobacterium tuberculosis

<400> 372
caggcatgca agcttgatgc cgccgaaacc gagcgtgagc acgccgccag ccaccacgcc 60
cgggtcgggc gccggggccc ggccgccagg ctgctccgct cgggtgatggc acgccaccgc 120
gacaccaccc ggctgcgcta cgtcgagcca tacggggcgg agctccatcc gctcggccgc 180
cagtgtccgg gccctc 196

<210> 373
<211> 443
<212> DNA
<213> Mycobacterium tuberculosis

<400> 373
cctgcatccg gctcgtatgt tgtgtggaat tgtgancgga taacaatttc acacaggaaa 60
cagctatgac catgattacg ccaagctatt taggtgacac tatagaatac tcaagcttcc 120
aatccccctg ccctgatacg cgtcggcaac cgtgaacgcg atctcggcga ccgtcggatc 180
ggtttcatcc cgcacaaaac gcgcgtcggc tacggggtcg cttccgtcgg tcaccacca 240
gacgaagtgg tcgacgtagt cgacttccga caggtagtgc atcaacgccg gactgggaac 300
acnagccgac atgaaccgtc gatacagcgt ctncccggag aactggatgt gtccgtgcac 360
ggtcgcgtcg cggtcaccgg gcagcacggg gcgtaacatc agttgagtcc cgtcggcaag 420
ccgtaccgga atcggggaga cga 443

<210> 374
<211> 445
<212> DNA
<213> Mycobacterium tuberculosis

<400> 374
caagatgacg gccggtgccg ccccgatccg tgcctcggtc agcgcgaacg tgctttccgg 60
tccggcgacc accatgtcgc acgcaccgac caggccgaac ccgccggccc gcacatgccc 120
gttgatggcg ccgaccaccg gcagcggcga ctcgacgatg gcgcgcaaca gcgccgtcat 180
ttcccgcgcc cgcgccaccg ccatccggta cggatcacca ccaccaccgc cggcctcgct 240
gaggtccgcg ccggcgcgaga acgttccgcc ggtatgcccc agcacgacca gccgcaccgc 300
cggatctgct tcggccgcac tcagcccttg atgtagttgg ctgaccagcg tgctcgacag 360
cgcgttgccg ttgtgcggag agttcagtgt cagcctggcg aaggggccgc cgcaggcggc 420
cgggccagcg tagtcgacgg ggctg 445

<210> 375
<211> 308
<212> DNA
<213> Mycobacterium tuberculosis

<400> 375
ctcaagcttc gatcgacagt actcccgctt tgggtctggt cttcgagctg gtcgggtcatg 60
gtcggacctg ctggtagtgg ggatctaacg caacatggtc gggattcatc atggtgtacc 120
cgtgataccc attcgcagct gccggtgaaa ccccgcgatg ccgggatttc cagccgcact 180
aggatgtcta gccggccagc cgctgccgcc ggacttcggg atgttcggta taccaccgat 240
cggcaatctt gcntatccgc cgatgctcga acgctagcca ccccaaacca accactgtga 300
cnacaatc 308

<210> 376
<211> 239
<212> DNA
<213> Mycobacterium tuberculosis

<400> 376
tgaatttccc gatcccacaa tctcggttca gatacaggtc gccatacccc ttacttcggc 60
aacgctgggc ggattggccc tgccgtgca gcagaaccatc gacgccatcg aattgcccgc 120
aatctcgttc agccaatcca taccatcga cattccgccg atcgacatcc cggcctccac 180
tatcaacgga atttcgatgt cggaggctgt gccgatcgat gtgtccgtcg acattccgg 239

<210> 377
<211> 431
<212> DNA
<213> Mycobacterium tuberculosis

<400> 377
tactcaagct tgaacgctgc gagcgagccc atgtagagcg tttggtacca aaccgatcgg 60
tgggccaact tgccatgggc tcacagcggc tatcgcgagc gtgtagccga tcatcggcc 120
ggcgacgggtg gcctgagcgg caggggttgc cttatccatc ctcttgccgc atggttgccg 180
cagggagtgc cggttaagtct ggtcggcaac ctggcccgtc gcgggttggg ttcggattcc 240
ctcggctagt aaggtgctcg cctggtgtta caacgaatcg ctagacagct cttatcgga 300
gtggccgtcg cgatcggtgc gctgccgctg gcgacgcgt tcggcnttac cgccaccgga 360
acgtcccaag gtgcgctcat cgggctctac ggcgccatct tcgccggatt cttcccngcc 420
gtgttcgggtg g 431

<210> 378
<211> 334
<212> DNA
<213> Mycobacterium tuberculosis

<400> 378
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agggagtcgg catgcggtcc ttgcgccga ccccgctggc taaatagcca ccccgagcg 120
cggtcacggt ctttgacccg ggacgacggc ataccggcag cgcgaaatc gccgcgggct 180
gcagcgtgaa cgtcgaatac gagtcgaaca gtgtcggcgc gtaaaaacc gagccggcgg 240
tcgcttcggt aatcaacggc tcctgcgcaa ccagctgcaa ntncgggtg ccaccggcgt 300
tgacaatctt gatntcggcg acctcgcgca ccan 334

<210> 379
<211> 302
<212> DNA
<213> Mycobacterium tuberculosis

<400> 379
tactcagctt cggctcaggt ggtgctgctg gtaaagttn ctgaacgggtg caggtttcga 60
caatgtggtg ccggttcggc gggtagtgc atcgagacac tggcgaggc tatcgaccc 120
gttatcggt acaaacaat cgcggtatgc gttcttgagc atgagtcggc gaccgtcgtc 180
atggtcgaca ccacgacgg aaagacgcag atcgccgtca agcntgtgtg ccgcggatta 240
tcaggactga cctcctggct gaccggcntg tttggtcncg atgcctggcg cccggccggc 300
gt 302

<210> 380
<211> 240
<212> DNA
<213> Mycobacterium tuberculosis

<400> 380
catcacctgg ttcataaaac tggaagcagc gcagcgcttc cttttcggcc gcaacatgag 60
ccagcctctc gtcggcggtc gggtagcagg gctcgggcag ctcgcccgcg acagccgcct 120
gaccctgaaa ccagcttcca tatcccgca cgaacgacgc cagtccgcta cgtaaccct 180
ccgcgactgt ccatggacaa cancgcttc tccaccgacc gggcccggtg gtggggtgtt 240

<210> 381
<211> 362
<212> DNA
<213> Mycobacterium tuberculosis

<400> 381
ctcaagcttc cggcgggcca gtaccgaaag cggaacagc tcgcggcagc ccacaacntg 60
ctgcgtcggg ttgcccggcg cganatcaat tccaggcagc tcccggacaa tgcggctctg 120
ctggcccgcg acgaaggact cgaggtcacc ccggtgcccg gggtcgtggt gcacctgccg 180
atcgcacagg ttggcccaca accggccgct tgatgcccgg tcggcaagcc cggcagttgc 240
caaaccagc gtgatcaggc tcggctcgcg agttcggcga agaagtggct cgcctgatca 300
ctaccatcg gccaggatct gcgtgtcatc acnacgctcg ccaaggaggt tgttgtggtg 360
ct 362

<210> 382
<211> 411
<212> DNA
<213> Mycobacterium tuberculosis

<400> 382
gccacgtttc ggcgcgcccg gcatacggcg gcgtaccgat ctccgcgtca tacacccgcg 60
ggtaatcgcc gacggtgccg gttcgcgagc cgaagggtgac gacgctgatt gaatcgagtt 120
ccagggtccag cgggtggcgc agcaacggcg cgagctcaac gacgtcaatc acgttgtcgc 180
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ccgccaccac cgcgacaccg tcttgacgcg ggacgccacc cccggatcgg ttgttgggca 300
aggtaattgg gtcattccat ttgacgggac gccgaccccg cagccccagt accgcccacg 360
accacgccg ctgaccccac cactgtacga acaccaaggc gacgccgacc a 411

<210> 383
<211> 331
<212> DNA
<213> Mycobacterium tuberculosis

<400> 383
ctcaagcttg atgccgcta aaccgaagcg tgagcacgcc gccaccacc acgcgcgggt 60
cgggcgccgg gcccgggccg ccaggctgct ccgctcggtg atggcacgcc accgcgacac 120
caccgggctg cgctacgtca agccataccg ggccggagcta catcggtcgc gccgcccagt 180
gttcggggcc tctttcgagg tcnaggtcna taccgatttg cgcacccgca gccgcaccct 240
ggacgacaga accgtgccct acgagtgcct gtcgggcggg gccaaagaac ancttggtat 300
cctggcgcg ttggccggcg cggtcctggt c 331

<210> 384
<211> 254
<212> DNA
<213> Mycobacterium tuberculosis

<400> 384
ctcgggtacg cttcggtcgc agtgtgcgag tgatagatga cgaccgggac ctcgtcggca 60
tcttccatag cccgccacac cttcagttgc tcaccggaat ccaaccggta naangtcggc 120
gagcgctcgg cattggtcat cgggatatgc cgctcgggac ggtcagagcc ctcggtccg 180
gccagcactc cgcaggett cgtcgggtgg tcgcgacncg catggggcac catcgcatc 240
accaggtctg cgcg 254

<210> 385
<211> 346
<212> DNA
<213> Mycobacterium tuberculosis

<400> 385
ctcaagcttc aattcctcca cgacgcgttc ccaaataaat ttcccgatcc cacaatctcg 60
gttcagatac aggtcgccat accccttact tcggcaacgc tgggcggatt ggccctgccg 120
ctgcagcaaa ccatcgacgc catcgaattg cgggcaatct cgttcagcca atccataccc 180
atcgacattc cgccgatcga catcccggcc tccactatca acggaatttc gatgtcggag 240
gtcgtgccga tcgatntntc cgtcnacatt cggnggtca ccatcaccgg caccagnatc 300
gacccgattc cgctgaactt cgacgttctc agcagcgccg gaacca 346

<210> 386
<211> 287
<212> DNA
<213> Mycobacterium tuberculosis

<400> 386
ttaacccccg tggcctctac gccgcctncg ggtcgaacat gcatcccgag canatgctcg 60
agcgcgcacc cactcgccg atggccggaa cgggctggtt acccggtgg cggtgacgt 120
tcggcggcga ggacatcggc tgggaagggg cgcttgccac cgtcgtcgaa gaccagatt 180
cgaaggtgtt cgtcgtgctc tacgacatga ccccgcgga cgagaagaac cttgaccggt 240
gggaaggctc cgagttcggc atccaccana agatccgatg ccgcgtt 287

<210> 387
<211> 370
<212> DNA
<213> Mycobacterium tuberculosis

<400> 387
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ttatcgtggg tacgctcgtg ctttccatgg gcgcctcttt cgggctttcc gtattggtct 120
ggcaggacat tctgggtatc gagttgtact ggatggtgtt ggcatgtcg gtgatcctgc 180
tcttgccggt gggatccgac tacaatctgc tgctgatttc ccggttgaaa aangaaattg 240
gggcccggatt gaacaccgga attatccgtg ccatggctgg taccggggga gtggtgacgg 300
ctgccggcat ggtgttcgcc gttaccatgt cgttgtttgt gttcagcgat ttgcgaatta 360
ttggtcagat 370

<210> 388
<211> 330
<212> DNA
<213> Mycobacterium tuberculosis

<400> 388
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cgacgtcgtc cgcgggacac acctcgatgc tgccgccatg gacgcggtcg aacgcaagca 120
gtgatcgag ctacaacgcc gcgcggaacg cttccgccnc nggcgttacc gcatccggtt 180
gaccgggagg atcgcggtga tcgtcgatga cggcatcgcc accggagcga cggccaaggc 240
ggcgtgccag gtcgcccggg cgcacggtgc ggacaagggt gtgctggcgg tcccgatcgg 300
cccanacgac atcgtggcga gattcgccgg 330

<210> 389

<211> 346
<212> DNA
<213> Mycobacterium tuberculosis

<400> 389
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atacgacggc gtcgccgact ttccgcggta cccgctcaac tttgtgtcna ccctcaacgc 120
cattgccggc acctactacg tgcactccaa ctacttcacg ctgacgccgg aacaaattga 180
cncagcgggt ccnctgacca atacggtcgg tcccacgatg acccantact acntcattcg 240
cacgganaac ctgccgctgc tagagccact gcgatcgggt ccgatcgtgg ggaaccact 300
ggcgaacctg gttcaaccaa acttgaaggt gattgttaac ctgggg 346

<210> 390
<211> 355
<212> DNA
<213> Mycobacterium tuberculosis

<400> 390
tcgctcaagc gcntgaggcc gaancggctg gttacgactc cctgtttgtg atggaccact 60
tctaccaact gcccatgttg gggacgcccg accagccgat gctggaggcc tacacggccc 120
ttggtgcgct ggccacggcg accgagcggc tgcaactggg cgcgttggtg accggcaata 180
cctaccgcag cccgaccctg ctggcaaaga tcatcaccac gtcgcacgtg gttagcgccg 240
gtcgagcgat cctcggcatt ggagccggtt ggtttgagct ggaacaccgc cagctcggct 300
tcgagttcgg cactttcagt gaccggttca accggctcga aaaggcgcta canat 355

<210> 391
<211> 403
<212> DNA
<213> Mycobacterium tuberculosis

<400> 391
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cgaacgagga caccgcgacc cnettccgtg tgtgatcatt accgttgggc cactgcgtaa 120
ccgcttgccg cacaaagagc ccggtctcga cgtcgaaaag ctcatcgggc acccgattga 180
aatgcagcag cggcggcacc acccgtgccc gcagtgcagc aattgccttg atcagcccga 240
cgggtccccg cgatgccgtg ctgtgccccg tgttgctctt ggccgatcca agcgcgcagg 300
gggtgccccg gccatacacc cgcgccaggc tgcggtactc aatcgggtcg ccgattggcg 360
taccggtgcc gtgcgcctcc accacaccga ccgtttcggg ctg 403

<210> 392
<211> 440
<212> DNA
<213> Mycobacterium tuberculosis

<400> 392
caacagcgtt ccagcggcat accaccgcac atgccgtgca cccggcgccg ggccggagtcg 60
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ggccggcgat cgcgcgccag gtcgagttgg cgccgaccgt gatntcaccg ccgacgtagt 180
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gtccgcgaen tgcgggaenon cngncacacc atccgccagt ccgcgtggcg tcccgcgcgg 420
actctgcctc ggccgcgcca 440

<210> 393
<211> 353
<212> DNA
<213> Mycobacterium tuberculosis

<400> 393
ctcaagcttt gncgacgac gggcgatgtc gatganagga aaccccgagc cacaaccgac 60
nattttggcg tagccggcgg acntctgctc gattccgac acgtcggcgc tcgcatcgag 120
catggcgccg gcgacggcta gcagcgatcc gccgtcgtcg aggaacacga cagcagccgt 180
acgcccggcc gtaagcccg cccaggattc ggcgaaaaac cgttctacgt ggcgggtgta 240
ctgggtgtcc aatgattcgt ggggtgcgta ggcgtcgtcg caatcgtcga cataaatgcc 300
gtcggcccgc atcgcgtcaa caactcccgg gtgagtggaa tancacttgc cga 353

<210> 394
<211> 340
<212> DNA
<213> Mycobacterium tuberculosis

<400> 394
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aattcggcaa aatcggtaag agcctgaaga attcggatc gccggacgaa atctgcgacg 120
catagggggc agatacgctt cgggttttac agatgtcgat ggggccgctg gaggcttcac 180
gtccatgggc cacaaggat gttgtcggcg cgtaccgttt tctgcagcgg gtgtggcgct 240
tggtcgtcga cgagcacacc ggcgaaactc ggggtggctga cggcgtggaa ctcgacatcg 300
atacgctacg ggcgttgac cgcaccatcg tcggcgtgtc 340

<210> 395
<211> 362
<212> DNA
<213> Mycobacterium tuberculosis

<400> 395
ctcgtccttg actacgcca gtatcgaaan cctcctgtgc cggtncgcta aacacccggc 60
ggacactcan acggtgctgg tggcgcgga tggcaccgcg ggcagcaaag cgcacttctc 120
cggggacgac agcaagcgac cgctagacaa gaggggtcgt gcgcaggcag aagcgttggg 180
accacagctg ctggcgcttc gcgccaccga tgtttatgcc gccgaccggg tgcgctgcca 240
ccanacnatg gagccactcg ccgcggaact gaacgtgacc atacacaacg agccnccct 300
gaccgaagag tcctacgcca acaaccccaa acgcggccga caccgagtgc tgcagatctt 360
cg 362

<210> 396
<211> 356
<212> DNA
<213> Mycobacterium tuberculosis

<400> 396
gtatcgcttc cncctttggc caccagcagc cacagcgcgg ttcgcggaac gaacgtggac 60
atcaatagcc cggaatcggg gtgtgcaagt tggtaaaccg tgttgatccc aagctttgcc 120
agccttttcg tagtcttggg cccacacccc cacagtgtt cgacggtagc gtcacccatg 180
atggccatcc agttggcatc ggtgagctga tagatgccag ctggtttcgc caaccgggta 240
gcgatcttgg cgcgctgctt gttgtcactg atacctatcg agcaagacag cccggtttgc 300
gacaagatga cttttcggat ctcttcngcg aacttccaat gggggtctcc gggant 356

<210> 397
<211> 350
<212> DNA
<213> Mycobacterium tuberculosis

<400> 397
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ctgtccggga aatggcgggt ccccggtggt tttgctgang antgctgaac cgtagtcgaa 120
gtggcgggcg tcagactcca cccagccagc aggcagcgcg aagctgaatc ctccaaccgg 180
gttgtcgatc cggacagggt ggggtgctt tggggcaatg acagggtggcg gcggtgctt 240
cgggtcggcc ggcgagggt ctgctgtggg atccccggc tgggcattcg gcntnttggc 300
ggcggccggt ggtggggggg caacangtgt cccggtgctg gtggcgctgc 350

<210> 398
<211> 355
<212> DNA
<213> Mycobacterium tuberculosis

<400> 398
atctgtaccc gaccaagatc tacaccatcg aatacgacgg cgtcgccgac tttccgcgggt 60
accgctcaa ctttgtgtcg accctcaacg ccattgccgg cacctactac gtgcactcca 120
actacttcat cctgacgccc gaacaaattg acgcagcgggt tccgctgacc aatacggctcg 180
gtcccacgat gaccagtac tacatcattc gcacggagaa cctgccgctg ctagagccac 240
tgcgatcggg gccgatcgtg gggaacccac tggcgaacct ggttcaacca aacttgaagg 300
tgattgttaa cctgggctac ggcgaccggg cctatggtta ttcgacctcg ccgcc 355

<210> 399
<211> 360
<212> DNA
<213> Mycobacterium tuberculosis

<400> 399
ctcaagcttg caatgcgggt cgggatgccc atggttgaa natggtcgcc ctggcgctcna 60
atacgcgca ggcgatgagc tcaccggttc ggaacaacgt atcgaaaaac gtcgcactgc 120
tggcagatgg tatctccgat gtggttgtaa tttgtatccc aactctaact gtgctatcgg 180
atcagcgtga atatcganat attgcgaatg cgatgacagg ccgccattcg gtttattcgc 240
ttacgcttcc cgggttcgat tcgtctgatg cactgccgca aaacgcggat atgattgttg 300
aaaccgtatc taacgcaatt attgatgtgg taggcggcag ctgccgtttt gtgctgtcgg 360

<210> 400
<211> 272
<212> DNA
<213> Mycobacterium tuberculosis

<400> 400
caaatacacg ccggacgcac aggcggacat cgccatcccg agcacaccca aaacgggata 60
caggatggag gccaacgcca cggccgcgcc caggatcacc aaccacaccg gcttggtcag 120
cttgtcggcg gcggtatagg catcgggccg ctgcaacgca gcatgcacaa acgcgtacac 180
cgctgtcacc aagacggcga ccagcaatac cagcatgacg gtaccacga ggtggctcac 240
gcattcagac tatgcggttt gcatccaaca cg 272

<210> 401

<211> 306
<212> DNA
<213> Mycobacterium tuberculosis

<400> 401
ctcgtccttc ggcctcgctg caggagtggg agccgcaggg ctggaaatcc gaaaaacgag 60
ccggtgatcg cactgtcgcc gatcggcgcc gcacctggtt ggtgttacgg atgaatccgc 120
agegaaatgt ggctgcgggtg gcgtgtcgctg actcgttggc gtcgacgctg gtggcagcca 180
ccgagcgggtt ggtccaggat ctggatgggc aaagtgtgtc ggcccggccg gtgacggccg 240
atgagctgac cgaggtcgac agcgccgtgt tggctgactt ggaaccgaca tggagtcgcc 300
ccggtt 306

<210> 402
<211> 300
<212> DNA
<213> Mycobacterium tuberculosis

<400> 402
gtctagnccg ccgaacacga tacgggtgtc attggccacc ggccggcggt gtccgggaaa 60
tggcgggtcc ccggtggttt tgctgaagan tgctgaaccg tagtcgaagt gggcggcgctc 120
agactccacc cagccagcag gcagcgcgaa gctgaatcct ccaaccgggt tgtcgatccg 180
gacaggttgg ggtgcgtttg gggcaatgac aggtggcggc ggtgcgttcg ggtcggcccg 240
cggaagtgtc gcgttgggat cgcccggctg ggcattcggc gtgttggcgg cggccggtgg 300

<210> 403
<211> 396
<212> DNA
<213> Mycobacterium tuberculosis

<400> 403
actcaagctt gagattggcg tcaacgggtg tcggcaccgg cgtcctgcag ttggtaggcc 60
tgagttttgt gcatcaggcc gatgccgagg ccctcgtagc cacgcatgta cancaccacg 120
ccgcgccccct cacgggagcag catcgccagc gcggcggtcca gctgaggccc gcaatcgagc 180
cggcgtgacc caaacacatc gccggtcaag cactccgaat gcacccggac cagcacgtcg 240
tcaccgtcgg cgttggggccc ggcgatctcg ccggcgacca gcgcgacatg ttccacgtcc 300
tcgtaaatgc tgggtgtancc gatggcgcgga aactccccat gacaantcgg aatcccgcgc 360
ctcggcgacc ccgctcaatg ttgcttctcn tgcttg 396

<210> 404
<211> 352
<212> DNA
<213> Mycobacterium tuberculosis

<400> 404
tcgacnagca ttcttgacng ttgttttggc tcggcatggt tagccaaggt tctgcgggtcc 60
caccagatca tcttggtccg gtagecgtcg tcggggtatg ctgccgcccg gattctcgtc 120
gctattactc cccccgaaga acgccaccgg tcacgcgcgt gggccgcccg ggtccccatc 180
acaaactgaa cccccaacag gggacatgct tagcggtagg gcgcgcgcca aggcggcagc 240
aatcgcatca ctgcgtgcg cgtcactatt aaccacccg gacttcactt ccacgacccc 300
gaatggcgcc cgggtcattga tcatcttgcg caccgcggat aatccgggat tg 352

<210> 405
<211> 420

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 405

```
accggggcca ctccgcacaa tctgtacccg accaanatct acaccatcga atacgacggc 60
gtcgccgact ttccgcggta cccgctcaac tttgtgtcna ccctcaacgc cattgccggc 120
acctactacg tgcactccaa ctacttcate ctgacgccgg aacaaattga cgcngcgggt 180
ccgctgacca atacggtcgg tcccacnatg acccantact acatcattcg cacgganaac 240
ctgccgctgc taaagccact gcgatcgggt ccgatcgtgg ggaaccact ggcgaacctg 300
gttcaaccaa acttgaaggt nattgttnac ctgggctacg gcganccggc cnttggttat 360
tccacctcnc cgcccaatgt ttgcnactcc cgttcggggg tggtcccnna aggtcaacct 420
```

<210> 406

<211> 328

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 406

```
cgctcaagcg cntgaggccg aancggctgg ttacgactcc ctgtttgtga tggaccactt 60
ctaccaactg cccatgttgg ggacgcccga ccagccgatg ctggaggcct acacggccct 120
tggtgcgctg gccacggcga ccgagcgggt gcaactgggc gcgttggtga ccggcaatac 180
ctaccgcagc ccgaccctgc tggcaaagat catcaccacg ctcgacgtgg ttagcgccgg 240
tcgagcgatc ctcggcattg gagccggttg gtttgantcg gaacaccgcc agctcggtt 300
cgagttcggc actttcagtg accggttc 328
```

<210> 407

<211> 315

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 407

```
ctcaagcttg cgttcgatga agtagtcgtc ggtagcgccc gcctcttcga gctccttggc 60
gatgcccgag aaggagtcag cgccgcccag cttggccagg atcttgctcg cctgttcctt 120
gacgatgcgg gcccgcggat cgtagttctt gtagacacga tgaccgaaac ccatcaattt 180
gaccccgccc tcgcggttct tgaccttgcg taaaaactcg ctgacgtcgt cgccgctgtc 240
gcgaatgccc tcgagcatct ccaggacagc ctgattggcg ccgccatgaa gcggacccca 300
tagtgcgttg atgcc 315
```

<210> 408

<211> 329

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 408

```
ggtcaggccg agcaggcgcg aggaacgacg aaccaacaa gccatggtgg ttggcgccgt 60
cgagaggtcg gcggtcgcca caacgggaag atcgccctga gcgtcgctcg accgccgcct 120
cgagttgggt cataacgaag tagctgatgc cgatcatgtc gacgtttccg tcgcatcagc 180
gtgcagcggc gacccactcn acgaggtctc ggtgccggcg cgccagggc accagcagtg 240
acgagtcag gcgccgtcgg gccaaagcag cgcggtgcca nccgtggtgg gtcgggcat 300
ggttgggtgt gctcatttcg ggaacgcca 329
```

<210> 409

<211> 294

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 409

```
ctcgaagctt taacagcatc aaccccgccc cgcaccagca ccgacacnat gtcgatgcc 60
tcgaggtgaa tgtcgaactg gcgcaaacca tcggcgaccg cgaccaccgg caacatgggt 120
accggcgatt tccggtgcc  atgccgaccc gacggggcgc tctcaccgca ggtgacctcg 180
atcaccgaga ccancgggc gttntntca cgcacccta ccgtgtcacg cccaaaacgg 240
cgctgggtgt cgattgccg agtgcacccc ncaccagtg tcgtgcccg atcc 294
```

<210> 410

<211> 288

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 410

```
tgatgccgca cccgatcgac ggtcggttggc cgggggttgac tggccgcccg gcgaagcagg 60
gcgtcgaccg cggcccgga gtcggcgccc gtcaccggtc ggccattgcc cgggcgggag 120
tcgtcgagct gaccacggta gacaagtcgg cgctggccgt cgaagacnaa cgtgtcgggt 180
gtgcaggccg cggagaaggc gcgggcgacn tcttgggttt cgtcgtnag atacgggaac 240
gtccagccgt ggcggcgggc ctcggcgacc atctgatcg gcccgcc 288
```

<210> 411

<211> 420

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 411

```
tttcgggcga ggcggtatan cttccntcg taccggcgac cgccagccga naagctcggt 60
ttcccagtg tgctggggat tctcacgctg ctgctgantg cgtgccaaac cgcttccgct 120
tcgggttaca acgagccgcg gggctacnat cgtgcgacgc tgaagttggg gttctccatg 180
gacttgggga tgtgcctgaa ccgggttcacc tacnactcca agctggcgcc gtctcgtcg 240
caggtcggtt cttgcgatag ccgggaggcc cggatccgca atgacggatt ccntgccanc 300
gctccgagtt gcntgcggat cgactacnaa ttgatcacc anaaccatcg ggcgtnttac 360
tgctgaagt acctggtgcg ggtcggatac tgctatccg cggtgacaac cccggcaagc 420
```

<210> 412

<211> 378

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 412

```
gttttggtc ggcattggtta gccaaagttc tgcggtccca ccagatcatc ttggtccggt 60
agcgctcgtc cgggtatgct gccgcggga ttctcgctgc tattactccc cccgaagaac 120
gccaccggtc cagcgcggtg gccgcgcgg tccccatcac aaactgaacc cccaacaggg 180
acatgcttag cggtagggcg cgcgccaagg cggcagcaat cgcactactg cgctgcgcgt 240
cactattaac ccaccggac ttcacttcca cgaccccgaa tggcgcccgg tcattgatca 300
tcttgcgcac cgcggataat ccgggattgc cagcccatte nactaccgca tgcgagtcac 360
cggctgaccg cagcggtc
```

<210> 413

<211> 347

<212> DNA

<213> Mycobacterium tuberculosis

<400> 413

```
tgcgctagggc ggggttcccc ttccgtccga gcngtcagaa gctcctatga caatgcacta 60
cccagacna tcaacggcct atgcaatacc nagctgatca aaccggcaa gccctggcgg 120
tccatcgagg atgtcgagtt ggccaccgcg cgctgggtcg actggttcaa ccatcgccgc 180
ctctaccggt actgcggcga catcccgccg gtctaactcg acgccgcctc actacgtca 240
acgccagaga ccancggcg gctgacgtct cagatcagag agtctccgga ctcaccgggg 300
cggttcatcc cactgtcga tagcgtctgt ggataacttt gtctgca 347
```

<210> 414

<211> 165

<212> DNA

<213> Mycobacterium tuberculosis

<400> 414

```
gcgcgtngaa ctgataggtg cggcccggct cgagcangcc ggccatttgt tcgatgcggt 60
taccgaagat ctcttcgggtg acctgcccgc cgccggccag ctcggccag tgcccggcgt 120
tggccgcccgc ggcgacaatc ttggcgtcca cgggtggtctg ggtca 165
```

<210> 415

<211> 317

<212> DNA

<213> Mycobacterium tuberculosis

<400> 415

```
ctcaagcttc aatacagagt tataaactgt gataatcaac cctcatcaat gatgacnaac 60
taacccccga tatcaggtca catgacgaag ggaaagagaa ggaaatcaac tgtgacaaac 120
tgccctcaaa tttggcttcc ttaaaaatta cagttcaaaa agtatgagaa aatccatgca 180
ggctgaagga aacagcaata actgtgacaa attaccctca gtaggtcaga acaaagtga 240
cgaaccaccc tcaaattctgt gacagataac cctcagacta tcctgtcgtc atggaagtga 300
tatcgcgga ggaaat 317
```

<210> 416

<211> 379

<212> DNA

<213> Mycobacterium tuberculosis

<400> 416

```
ctcaagcttc gatcgacatt actccgcct tgggtctggt ctccgagctg gtcgggtcatg 60
gtcggacctg ctggtagtgg ggatctaacg caacatggtc gggattcatc atggtgtacc 120
cgtgatacc attcgcagct gccggtgaaa ccccgcatg ccgggatttc cagccgcact 180
aggatgtcta gccggccagc cgctgccgcc ggacttcggg atgttcggta taccancgat 240
cggcaatctt gcgtatccgc cgatgctcga acgctancca cgccaaacca accactgtga 300
cnacaatcgc caccacacca aaggtcatgc cctcggcgtg atgtccggtg ccgaaagccg 360
caagagctcc gacgccgcc 379
```

<210> 417

<211> 420

<212> DNA

<213> Mycobacterium tuberculosis

<400> 417

```

cattcccaat tgaatttccc natcccacaa tctcggttca gatacaggtc gccatacccc 60
ttacttcggc aacgctgggc ggattggccc tgccgctgca gcanaccatc gacgccatcg 120
aattgccggc aatctcgttc agccaatcca taccatcgga cattccgccg atcgacatcc 180
cggcctccac tatcaacgga atttcgatgt cggagggtcgt gccgatcgat gtgtccgctg 240
acattccggc ggtcaccatc accggcacca ggatcgaccc gattccgctg aacttcgacg 300
ttctcagcag cgccggaccc atcaacatct cgatcatcga cattccggcg ctgccgggct 360
ttggcaactc gaccgagctg ccgtcgtcgg gcttcttcaa caccggcggc ggtggcggct 420

```

<210> 418
 <211> 255
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 418
ctcaagcttt cggcgggagac ggacannttg cgaacattga tgacaaaata gaaatcattg 60
atggtttgag tcaccaggcc gatcaagcct tcgccgagcc aaattccaat caagaggccc 120
aagcccgtag caatcagccc ggcaacgagg gattccgtca ttatcagcca aaataactgc 180
tctcgggtta caccaaaaca gcgcaatatg gcgaaaaacg gtcgccgttg cacgacatta 240
aatgtcacgg tattg                                     255

```

<210> 419
 <211> 359
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 419
agcttaactg ctccctaata cctgggggctg tgccctgcggt gtatgcacgg catacggaca 60
tcntccctt gagaccnccg gtctaatacag ccacgtgtcc accatcaggg gtcaaccccg 120
gccaaagggc acggcacccc aagttcgccg accgttaacc tattgctgtg agcttcattt 180
gctgcgagca aaacagttgg tcggccgtta ggaactgaat tgacactcaa ccgatttggt 240
gccnccgtag gtgtcctggc tcgggggtgcg ctggtgttgt ccgcgtgtgg taacgaccac 300
aatgtgaccg ggggaggtgc aaccactggc cacgcgtccg cgaatgtcta ttgcggggg 359

```

<210> 420
 <211> 314
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 420
ctcaagcttg ggggtggcgt gtcggtcggt gtgcttggcg gcgtcgggat caacaccgcc 60
cacgaaatgg ggcacaagaa ggattcgctg gagcgggtggc tgtccaaaat caccctcgcc 120
cagacctgct acgggcactt ctacatcgag cacaaccgtg gccatcacgt ccgggtgtcc 180
acaccggagg acccggcgtc ggcgcggttc ggcgaaacgt tgtgggagtt cctgccccgc 240
agtgttatcg gcggccttgcg ctcggccggtt catttgaggg cccaacggct gcgtcggctc 300
ggcgtcagcc ccct                                     314

```

<210> 421
 <211> 280
 <212> DNA
 <213> *Mycobacterium tuberculosis*

```

<400> 421
gcaccaaggc cccacacgtc accctgtgac ctctgcgcgc gaccccgccc gaggtcctgg 60

```

```

ccgttaccac ctgaacgggc gagccgggag tctggtacgc atcgaacaaa gagcaagggtg 120
catgggcgga gttgttcgcg cacttcgtcg atgacgggggt cnatccattc gaggtccgtc 180
gccgcgtcgg tcgagtggcg gtcacactcc aggtactcga cctcacagac gagaggactc 240
gatcccatct aggtgtggac gaaacagatc ttctgtccga 280

```

```

<210> 422
<211> 230
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 422
tcgcctccgc atatgggtcg acgccaaagcg ggtccggatt tctgggcttc atcgctcgcg 60
ccgtcgcgac aaacagcgcg gtcgaaccga cactcggtgt gatgtcccag ctatcacctt 120
cggtagcgac ccaatcgacc ctacncggct atctcagccg cgatctccag gctccgccga 180
gccaggtgca tcccgggtccg gatcccacta acccggcacc attggcgctc 230

```

```

<210> 423
<211> 272
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 423
gtcctcgagt gccgcccgtcg ncacncccg cgcccgcgcg gccacttgga tgcgaccgct 60
ttcaagtccc ttcacatctt gcgaaaagcc ttgacccatg gtcgcgccca ggatcgccga 120
gaccggcacc cggaggttgt cgaacgacag ctgcgaggat tcgacgccct tgtaacccaa 180
cttcggcaag tcccgcgaca ccgtgagtcg cggcccgggt tcgacgagca cgatcgacat 240
gccttggtgc cgcggtgtgg cgttcgggtc gg 272

```

```

<210> 424
<211> 423
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 424
ggcataccaa tgtggacttc tgtcaccca cgatatccgt ggtctgatcc gctgctgcgg 60
cgggctgcna cctgcntctc ngcggcacc gtnactacat ggcncgcgcc gcacgcatac 120
gtcgcggcgg gaccactcc nactggtcga cgggtgtggc cgcgtgtccg cangtcccna 180
accgcggcgc accgacgaaa ccggccgcgcg tccgttctgg accaacgctc atgtgccgtc 240
gggggtccatg ctcgacgcca tcgagaccgt aaccagcgtc ctcgagcggg tcgcctccgg 300
cttcctgtac atcttcgtgg ctgctcgcgc cgtgccgcgc cgcggatggg cgaccacaac 360
gccaaaccac tcggcggtga catcacctgc cgcgccactc gacctggcgc gcgatcgcg 420
ccc 423

```

```

<210> 425
<211> 315
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 425
gtgagcagac ctacgcncnc tggttgcgcc aactcggtac cgatcatggc ggcngcctg 60
tcgtcaccca taccagcgga acaagacagc ccggtccgcg acaagatgac tttcccgatc 120
tcttcggcga cttccatggg gtgcgtccgga gtcccgggcg ccaccgcgag gtaaccctcg 180
tctcagtccc atacgcgacc gggtatccac gtgcgcgaac aacgccacca cctccccaga 240

```

cgccncgttg tacgcggctg ggttccacng caataagtgg cctcanggca tcgtccggcg 300
gcggtcnca acgca 315

<210> 426
<211> 335
<212> DNA
<213> Mycobacterium tuberculosis

<400> 426
ctcaagcttg aggttaactt tgaacggatc gagctggacg ttcgagacgg tgatcggggc 60
gaacctgaat tgtccggtaa tgcccaacgc aaaaagcagg gtggtggccg gggcggtgaa 120
accggcgctg gcggcaccgt cgaaatctat gtggattgcc ggaatgggga tgtccggcac 180
ggcgaaaccg tagttcgctt gtcccgtgag gcccaggtgg atggggggaa agatcctggg 240
gtccgggata ataatggggc cgatgccgcc ggttgaagtc cactggatcg ggaattccgg 300
aatcttgatc cgacgttcag gccgaacagg ccctc 335

<210> 427
<211> 346
<212> DNA
<213> Mycobacterium tuberculosis

<400> 427
cggcgacgtc gcgatacgcc gagcagtttg gaatcgctct gcagcaaacc aatattctgc 60
gcgacgttcg agaggacttt ttgaatggac ggatctacct gccgcgcgac gagctggacc 120
gattaggcgt acgcctccgc ctggacgaca ccggggcact cgatgacccc gacggacggc 180
tcgcggcnct gctgcggttc agtgccgacc gcgcgcgaga ctggtnttcg ctgggactgc 240
ggctgattcc acacctcgac cgccgcagcg ctgcctgctg tgcggccatg tctggcatct 300
accgccgtca gctgccttg atcagagcat cgccggcggt cgtcta 346

<210> 428
<211> 332
<212> DNA
<213> Mycobacterium tuberculosis

<400> 428
ctataaaata ctcaagcttg atgccgcccga aaccgagcgt gagcacgccg ccagccacca 60
cgcgcgggtc gggcgccggg cccggggccgc caggctgctc cgctcgggtg tggcacgcca 120
ccgcgacacc acccgntgc gctacgtcna gccataccgg gcggagctac atcggctcgg 180
ccgcccagtg ttcggggcct ctttcgaggt cnaggtcnat accgatttgc gcatccgcag 240
ccgcaccctg aacnacanaa ccgtgcccta ctattgcttg tcnggcgggg ccaaaaaaca 300
gcttggcatc ctggcccnat tggccggcgc gg 332

<210> 429
<211> 276
<212> DNA
<213> Mycobacterium tuberculosis

<400> 429
cttcggctgc agtgtgcgag tgatagatga cgaccgggac ctcgtcggca tcttccatag 60
cccgccacac cttcagttgc tcaccggaat ccaaccggtg gaaggtcggc gagcgctcgg 120
cattggctcat cgggatatgc cgctcgggac ggtcagagcc ctcggggtccg gccagcactc 180
cgcaggcttc gtcgggggtg tgcgcagcgc catggggccac catcgcatc accaggtctg 240
cgcgaatcnc cancacgtan acngttcctt tctctaa 276

<210> 430
<211> 420
<212> DNA
<213> Mycobacterium tuberculosis

<400> 430
ctggcaccaa ggccccacac gtcaccctgt gacctcctgc gccgaccccg cccgaggtcc 60
tggccgttac caccgaacgg gcgagccggg agtctggtn cgcacgaaca aanagcaagg 120
tgcatgggcg gagttgttcc gccacttcgt cgatgacggg gtcnatccat tcgaggtccg 180
tcgccgcgtc ggtcnagtgg cggtcacact ccaggtactc gacctcacag acnaaaggac 240
tcnatcccat ctaggtgtgg acnaaacaga tcttctgtcc gacnactaca ccaccacca 300
ggccatcgcc gccgcccgcg atgccaaactt cgacgccgta ctggccccgg cggggggcgc 360
tccccggttg tcaacacttg ccgtgttcnt tcacgcnctg ccccatcc aacccaacg 420

<210> 431
<211> 130
<212> DNA
<213> Mycobacterium tuberculosis

<400> 431
gttcttgggc ccatgaggag gtatcgccgt ttccaccacg cggtcggggg ggcggttgc 60
tagctcaccg atggtgcgct tgtgcaggcc gccgggatac cccgagtgcc ggtaaaccat 120
cttgtgtgc 130

<210> 432
<211> 215
<212> DNA
<213> Mycobacterium tuberculosis

<400> 432
caataactcaa gcttggcgtg ccgttccaac ccgaattggc tttcggcgcc atcggtgagg 60
acggcgtgcg ggtgctcaac nacnacgtc tccgcgggac acacctcgat gctgccgcca 120
tggaacgggt cgaacgcaag cagctgatcg agctacaacg ccgcgcggaa cgcttccgcc 180
gcggggcgtga ccgcattccg ttgaccgggc ggatc 215

<210> 433
<211> 360
<212> DNA
<213> Mycobacterium tuberculosis

<400> 433
cntcatgatg atcatcacc gaagtgtggt agccgcagtg gttatcgtgg gtaccgtcgt 60
gctttccatg ggcgcctctt tcgggctttc cgtattggtc tggcaggaca ttctgggtat 120
cgagttgtac tggatggtgt tggcgatgtc ggtgatcctg ctctggcggt tgggatccga 180
ctacaatctg ctgctgattt cccggttgaa agaggaaatt ggggccggat tgaacaccg 240
aattatccgt gccatggctg gtaccggggg agtggtgacg gctgccggca tgggtgttcg 300
cgttaccatg tcgttgtttt tggttcagca tttgcgaatt attggtcaga tcggtaccac 360

<210> 434
<211> 265
<212> DNA

<213> Mycobacterium tuberculosis

<400> 434

```
atactcaagc ttttacggtg atcgcnatc acctggttca tgaactggaa gcagcgagc 60
gcttcctttt cggccgcaac atgagccagc ctctcgtcgg cggtcgggtg caggtgctcg 120
ggcagctcgg ccgcnacagc cgcctgaccc tgaaaccagc ttccatatcc cgcgannaac 180
gacgccagtc cgctacgtna cccctccgcg actgtccatg gacaacagcg cgttctccac 240
cgaccgggccc cgggtgtggg gtntt 265
```

<210> 435

<211> 264

<212> DNA

<213> Mycobacterium tuberculosis

<400> 435

```
gctggtagag tcgctgaccg gtgcaggttt cgacaatgtg gtgccggttc ggcggtacg 60
tgccatcgag aactgggcgc aggtatcgcc accggttacc ggctacgagc aaatcgcggt 120
atgcgttctt gagcatgagt cggcgaccgt cgtcatggtc gacaccacg acggaaagac 180
gcagatcgcc gtcaagcatg tgtgccgagg attatcagga ctgacctcct ggctgaccgg 240
catgtttggt cgcgatgcct ggcg 264
```

<210> 436

<211> 335

<212> DNA

<213> Mycobacterium tuberculosis

<400> 436

```
gctttccgcc gatacccgcc atgtcnegca catccaggac ttctgggggg atccgctgac 60
agcggcgagg tcccaaagtg cggatgatcg ggccgcctac gtcgtggtgt acctcgtcgg 120
taacaacgaa accgaagcgt atgactcggc ccacgcggtg cggcacatgg tggacaccac 180
accgccaccg cacggggtga aggcctatgt caccggtccg gcancactca atgccgacca 240
ggccgaggcc gganacaaaa ntatcgctaa ggtcaccgcg atcacnagca tggatgatcg 300
agcaatgttg ctagtgatct atcgctccgt aatta 335
```

<210> 437

<211> 304

<212> DNA

<213> Mycobacterium tuberculosis

<400> 437

```
cttccaaccc gaattggctt tcggcgccat cggtgaggac ggctgcgagg tgctcaacga 60
cgacgtcgtc cgcgggacac acctcgatgc tgccgccatg gacgcggtcg aacgcaagca 120
gctgatcgag ctacaacgcc gcgcggaaag cttccgcgcg gggcgtgacc gcatcccgtt 180
gaccgggagg atcgcggtga tcgtcgatga cggcatcgcc accggagcga cggccaaggc 240
ggcgtgccan gtcgcccggg cgcacggtgc ggacaagggt gtgctggcgg tcccgatcgg 300
ccca 304
```

<210> 438

<211> 223

<212> DNA

<213> Mycobacterium tuberculosis

<400> 438

tactcaagct	tgcgcgagatc	cggatggcac	tcacgctgga	caagaccttc	acaaaatctg	60
aaatcctgac	ccgatacttg	aacctggtct	cgttcggcaa	taactcgttc	ggcgtgcagg	120
acgcggcgca	aacgtncctc	ggcatcaacg	cgtccganct	gaattggcag	caagcggcgc	180
tgctggccgg	catggtgcaa	tcnaccagca	cgtcaacc	gta		223

<210> 439
 <211> 263
 <212> DNA
 <213> Mycobacterium tuberculosis

cccacgactt	tctcctcgat	cagttggatt	tgtacgaaga	ggcaacgaaa	gcagtgatcc	60
tcgggatggt	cgacgcctac	atcgacccgc	cgttcacgcc	gcacagcctg	ctagatgcgc	120
tgggcgagca	ggtcccacag	ttcgccgcta	aggcacggcg	tctgttcccg	tccggatcgc	180
cattcggcct	cggcgtcctg	ctcccattcg	atcaataggg	ctggcagctc	cgtcggcagg	240
ggcctacgcc	tcaccccgtc	acg				263

<210> 440
 <211> 301
 <212> DNA
 <213> Mycobacterium tuberculosis

ctcaagctta	tgcgcgccgg	ccgaggtctg	ctcacggcaa	cccctgaagt	ttaggggacn	60
acctactcag	cgcaaaattt	cgctaattgt	agtccgcccc	accaggggna	natcaaccce	120
tgtcgatcat	gatctaccgg	gataccggat	tggcggtagc	gcccacgata	gtcnaaatnt	180
ccgcctgaat	catcggatag	ctgatccggc	gtcaacgcgt	tttganttca	ccgcgcaaca	240
gccgccaggc	cggcccgcac	cganccgata	tcntcggggc	gcatggggcc	caatcttntc	300
g						301

<210> 441
 <211> 90
 <212> DNA
 <213> Mycobacterium tuberculosis

gtgtgtggtg	gaacccatct	gagcagtgtg	ccaaaccggg	gcagacagct	cccaattgac	60
gtgagccgc	tcacttgctg	ggtaagcgctc				90

<210> 442
 <211> 183
 <212> DNA
 <213> Mycobacterium tuberculosis

ctttacactt	cctgcatccg	gctcgatatg	tgtgtggaat	tgtgagcgga	taacaatttc	60
acacaggaaa	cagctatgac	catgattacg	ccaagctatt	taggtgacac	tatagaatac	120
tcaagcttgg	gcgtgacggc	caccggggcc	actccgcacc	atctgtaccc	gaccaagatc	180
tac						183

<210> 443
 <211> 348

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 443

```
caggcatgca agcttttagct gcccgaatgc gtcaccccga tgcgcccaga tcgggggcttc 60
gcagataaag cacgaacagg cgggcaaaac gtcnatctcg gagccggaag ggcaatcagc 120
cgaccgtcga cgaacgacac cggcgagacc acttaggcag tgacggccgg cccgaacatt 180
acgcgctcgt tgattaggcg ttcggtctcg tccgcgggtca tgccgagcag cttgcggcag 240
atctgaacgc tgtcctgtcc gggcagcggc gccgggcggtt ggggtgcctg cccgaatgtg 300
acgaaacgga gccggacccg tctcggcggg ccgcggaagg cgatccgc 348
```

<210> 444

<211> 335

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 444

```
cncaagcttg cggatgttac ccctgacagc ctgaactatg tcnaaacaca cggcaccgga 60
acggtgttgg gggaccccat cganttcgag tcgctggcgg ccacttatgg cctgggtaaa 120
ggccagggcn anagcccggtg cgcattgggg tcggtcaaaa ccaacatcgg ccacctggag 180
gcgcccgccg gtgtggctgg atncatcaag gcggtgctgg cggtgcaacg tgggcacatt 240
ccccgcaact tgcattcac ccggtggaac ccggccatcn acgcgtcggc nacgcggctg 300
ttcgtgccna ccnaaaaccc cccgtggccg gcggc 335
```

<210> 445

<211> 289

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 445

```
ggaaccggtg accagatcag ctcgctcgacc tcaactgccg ggggtgaattc cccaccgggtg 60
ctgcgcgctg cccagtagtg caccttcttg acgcctcgaa aaggggagtc ggtcgggtag 120
gtcaccgtca ggagccgcct acccagggtg gcgcnatagc cggctctctc gagtatctcc 180
cgcaccgccc ccaccgggtg ggtctcacc anatecactt tgcccttggg cagcgaccag 240
tcgtcgtanc nggggcgggtg aatgacaacg atctcgaccg gcccttcn 289
```

<210> 446

<211> 263

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 446

```
tactcaagct tcagaacagg cctgttgtgg gencacccgg ctgcgcgagt tctgcacgca 60
ccgcctcaag tgccggccgc accgcgggca tctcccggtc acgcagggcc gcggcccgcg 120
ccgcagcgac ggcgtgttcg cgcagttcgc cgtcaatgat gctgacctga tcggccaccc 180
gggcgtttct ggcgtcgtcg cgttactaa tcgcggtgct cagcagcgtc tcgacagcca 240
ccacccgagt ggcgaccagc tgc 263
```

<210> 447

<211> 279

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 447

```
taatgtcttg ccaacgtcac cacaatcgcg atgaattcaa tcatgccgcc cagggcgggc 60
aacccaatgg tggccgcgag cggcagctcg atcgcagcgc ggaggttgcc ggccgccagt 120
tgattcacga acagggtgag gtcataggcg ggcaggatag tgacgaaggc aagacctata 180
tctgccgtcg gaagaagaat cgagtagccg gtcgacacaa cggaagcgaa agtgtccgcg 240
atgttgatga gcgtcgccgg ttgtggcggc ggtggcggc 279
```

<210> 448

<211> 295

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 448

```
tactcaagct ttcgtcagtt catcgcgcca gcagaccaac aagagcatcg ggacatacgg 60
agtcaactac ccggccaacg gtgatttctt ggccgccgct gacggcgcg aacgacgccag 120
cgaccacatt cagcanatgg ccagcgcggt cggggccacg aggttggtgc tcggcggcta 180
ctcccagggg gggggcggtg tcgacatcgt caccgccgca ccaactgccc gcctcggggt 240
cacgcagccg ttgccgcccg cagcgganna tcacatcgcc gcgatcgccc tgttc 295
```

<210> 449

<211> 280

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 449

```
ccacccgtgt aatttgggat gggcnaaaag gcnaagcacc gcgtggccac gaacgccggg 60
agggacaatc tcggggcggt agggcttctc gcgggaaggc ccgaacgtac ggcgtttcaa 120
cacgtcgcg tccccctcga ccgcgaacat tcggggatgg cagcaacctg gtagcaccct 180
ggccggggcg tgatctgcag cgtcgccgcg ggtagtcgcc gcccgggcgg ctacagtctg 240
aaacgcgatg accatcgatg tgtggatgca gcatccgacg 280
```

<210> 450

<211> 320

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 450

```
tcaagcttta gctgcccga tccgtcance cgatgcncgc agatcggggc ttcgcanata 60
aagcacnaac agggcgggcaa aacgtcnatc tcggagccgg aagggaatc anccgaccgt 120
cnacaaacga caccggcgan accacttagg cagtgcaggc cggcccgaac attacncgct 180
cgttgattag gcgttcggtc tcgtccgcg gtcatgccgag cagcttgccg canatctgaa 240
cgctgtcctg tccgggcagc ggcgcggggc gttgggggtg ctgcggaatg tgacnaaacg 300
gagccggacc cntctcggcg 320
```

<210> 451

<211> 203

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 451

```
ccggggccac tccgcacaat cngtacnna ccaanatcta caccatcgaa tacgacggcg 60
tcgccgantt tccgcggtag ccgtcgaact ttgtgtcgac cctcaacgcc attgccggca 120
cctactacgt gcaactccaac tacttcatcc tgacgccgga acaaatngac gcntcgggtc 180
```

cgctgaccaa tacggtcggt ccc

203

<210> 452

<211> 287

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 452

```
nctggccttt ggtccacact aanacaatac tcaagcttcc ggccgcagag ccgccaactc 60
acgatatcgt taaccgatat cccgagccga tagctggcgg gctcgggtgg tggccagcgg 120
cgctgcgaacn aaaggtgtga ccgtcatgaa acagacacca ccggcgggccg tcggccgtcg 180
tcacctgtct ganatctcag catccgcagc cgggtgtgat gcgctttcgg cgtgtngtgg 240
gtncccgccc gagcccggca aaggccggcc cgacacaacc ccggaac 287
```

<210> 453

<211> 272

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 453

```
catctgcccc ccacacggac cgcggtgcgg acgcggtctga cgcgcttggg ggtcagcatc 60
gtggccgggtc tgctgttgta tgccagcttc ccgcccgcga actgctgggtg ggccggcggtg 120
gttgcgctcg cattgctggc ctgggtgctg acccaccgcg cgacgacacc ggtgggtggg 180
ctgggctacg gectgtatt cggcctgggt ttctacgtct cgttggtgcc gtggatcggc 240
gagctggtgg gccccgggccc ctggttgcca ct 272
```

<210> 454

<211> 364

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 454

```
gacaatactc aagcttgact ggccacccac cggcatgacc accgacaggc ccgactggtc 60
gtaccactcg aacgcggggg tgttgatgtc ccagccgctg aantcgtcct gcgcgcgcag 120
gccgtcnaac aggtacaggg cgggcgaatt ggcaccacca ctttggaatt ggaccttgat 180
gtcacggccc atcgacggcg acggcacctg caggtactcc accggcaagc ccggccggga 240
aaatgcccc gcggtcnccg tgccaccgac ggcgcgganc aaaccgaca ctagggccgc 300
gccnacggcc ccgaccacna ntcnacgcga catacccggt acggcgccac naaccctgtc 360
aaca 364
```

<210> 455

<211> 360

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 455

```
cctccaactc ggccggggaag cgacnccagc ctaccgagct tggagtccan gacgccagcg 60
gcggcgctcg tctgcgtcgt ggtgccgcgg ggggtggcgtt ggctggcaac gatctccacc 120
cagccggtcg gggtacccac gatctcggca tanacgcggg ccgaggccgg tgcgataccg 180
tattgcgtca attgggacgc ggttggtgat tcggctagct cggttgccac acccgtcagg 240
ggttcgacgt tggcggggttc ggccgggcccc ancaccgctg tcaccatgcc cgccaagccg 300
acctgcggcg ccaccaactg cagcaccanc atgtcgccgt cgcgcgccgc gatcacatgg 360
```

<210> 456
<211> 311
<212> DNA
<213> Mycobacterium tuberculosis

<400> 456
ctcaagcttt ttgagcgtcg cgcggggcan cttcgccggc aattctacta ncgagaantc 60
tggcccgata cggatctgac cgaantcgct gcggtgcanc ccaccctcat tggcgatggc 120
gccgacnatg gcgcctggac cgatcttgtg ccgcttgccg acggcgacgc ggtaggtggt 180
caagtccggt ctacgcttgg gcctttgcgg acggtcccga cgctggtcgc ggttgcgccg 240
cnaaagcggc gggtcgggtg ccatcaggaa tgccctnccg ccgcggcact gcacggccag 300
tgccgcggcg a 311

<210> 457
<211> 288
<212> DNA
<213> Mycobacterium tuberculosis

<400> 457
cnccagcttg attggtcttg ttgcattggc cagctgcgcg agcctggctc acttcaacta 60
cgacgaccgc aaacaattgc cgccttcgga tccgagttcg gttgggtacg cggcaatgga 120
gcaccatttc tcggtgaatc agactattcc tgagtacttg atcatccact ctgcacacga 180
cctgcgaacc ccgcgcggcc ttgccgacct ggagcagctg gcgcaacgtg tgagccagat 240
cccaggcgtt gccatggttc gcggtgtgac ccggccaaac ggggaaac 288

<210> 458
<211> 256
<212> DNA
<213> Mycobacterium tuberculosis

<400> 458
caataactcaa gcttgactgg gcccgacct tcggcgccac ccacaccgtc aacgcccgcg 60
aagtcnacgt cgtccaggcc atcggcggcc tcacggatgg attcggcgcg gacgtggtga 120
tcgacgccgt cggccgaccg gaaacctacc agcaggcctt ctacgcccgc gatctcgccg 180
gaaccgttgt gctgggtgggt gtcccnacgc ccgacatgcg cctggacatg ccgctggtcn 240
actttctctc tcacgg 256

<210> 459
<211> 327
<212> DNA
<213> Mycobacterium tuberculosis

<400> 459
tcgacggttt ggcggcctta aatgcactga ggtcgtcaat tgaccccaca gcggaaatgc 60
cgactattcg caggcctcct tcgccttggc tgccggagag gggctccgcg ggaaccgcat 120
gcaggtatat gacctcggtt tctcggtgac taccgcgtgc cttgtntang atnanctcgg 180
cgttggaatt gtccagccgg cccaattcat cgagcgcana ttcgtacacn tggccggcgg 240
cgacatacgc ttcaccgtgg atctgctcca cacggaccgc cctgtcggga tcctgctcac 300
gggtaangga acttacgtgg cactcgg 327

<210> 460
<211> 100

<212> DNA

<213> Mycobacterium tuberculosis

<400> 460

```
gaccacgccca ggctaatacac gtgacgctac cgaataccct ncctagtggg gcagggctccc 60
gctggaaatg gccctgtacc aactcgcgca ccggtgccag 100
```

<210> 461

<211> 114

<212> DNA

<213> Mycobacterium tuberculosis

<400> 461

```
cggcacccga cccctttgag ccgtccgcgc tggccgcggg ggaactggcc gacgagggac 60
tgatcgtgct gggcaaattg gtcgatggca cgctggccgc cgatctgaag gtcn 114
```

<210> 462

<211> 287

<212> DNA

<213> Mycobacterium tuberculosis

<400> 462

```
ctcaagcttg ccgttaccce gacttccgga gggacaccat gagcaccgcc agccgagcac 60
gaggccaaac tccgccgacg caggccgggt ggacttgctg tgctggacaa ggggttttagc 120
cgccgaagca gtgacgtaca tcggcgaaaa gcagttcgcc tgtcgaccga cggngcnnac 180
cgtgaggcta ggggaagcgag gagcacatgg ccgccgaccc gcaatgtaca cgctgcaagc 240
aaaccatcga acccggatgg ctatnctca ccgccatcg ccgcggg 287
```

<210> 463

<211> 288

<212> DNA

<213> Mycobacterium tuberculosis

<400> 463

```
catgtcgcgc acatccagga cttctggggg gatccgctga cagcggcggg atcccaaagt 60
gcggatgacg gggccgccta cgtcgtgggt tacctcgtcg gtaacaacga aaccgaagcg 120
tatgactcgg tccacgcggg gcggcacatg gtggacacca caccgccacc gcacgggggtg 180
aaggcctatg tcaccggtcc ggcagcactc aatgccgacc aggccgaggg cggagacaaa 240
agtatcgcta aggtcaccgc gatcacgagc atggtgatcg cagcaatg 288
```

<210> 464

<211> 255

<212> DNA

<213> Mycobacterium tuberculosis

<400> 464

```
atactcaagc ttcgggtacg tggcgggcgc tgctgctggc cgcggtcgcg gcgtgcgcgg 60
cctgcggctc cgtttacnag ctgcgcgtgc tgacactggc ggcnagcctg aacggcgggc 120
ggatcgtggc cacctccctg atcgtcgcgg gctacatagc cgcgctggga gcaggcgcct 180
tgctgatcaa gccgctactt gcacacgcgg ccacgcggtt catcgccgtg gaggcgggtgc 240
tgggcatcat cggcg 255
```

<210> 465
<211> 288
<212> DNA
<213> Mycobacterium tuberculosis

<400> 465
tgtcaagtcc tttcagatct cntttttatg acatgactgg agatctgtct agattgcagc 60
tcctgtgagc gtgggtaccg gattcaagcc ggtcgggtcac gccgcggtgg taccggcttt 120
gcggcagtg ctcggcctcga gttcggcgat cgcgcgcgaa gtgcgttcgc gcagcaagat 180
cgcgccgcta atgccggcga tgaccgcgat gaccagcgcg atccaggaga accgttccaa 240
ccagtgtctg gcggccatcc cggcgaagta gaccagtga gtggtgcc 288

<210> 466
<211> 224
<212> DNA
<213> Mycobacterium tuberculosis

<400> 466
caatactcaa gcttcaaaac aggcctgttg tgggcgcacc cggctcgccg agttctgcac 60
gcaccgcctc aantgcggcc cgcaccgccg gcatctcccg gtcacgcagg gccgcggccc 120
gcgccgcanc gacggngtgt tcgcgcagtt cgccgtcaat gatgctgacc tgatcggcca 180
cccgggcgtt ctgcggcgtc tncggttcac taatcgcggt gctc 224

<210> 467
<211> 320
<212> DNA
<213> Mycobacterium tuberculosis

<400> 467
tacgtgtgcg ctggagggag ccanntacaa catccacgcc aatgctcttg ccccgatcgc 60
ggcgaccagg atgaccagg acatcctgcc gccgaagta ctggaaaagc tcacaccgga 120
gttcgtcgca ccggtggtgg cctacctgtg caccgaggag tgtgccgaca acgcatcggt 180
gtacgtcgtc ggtggtggca aggtgcagcg agttgcgctg tttggcaacg acggcgccaa 240
cttcgacaaa ccgccgtcgg tacaagatgt tgccggcgcg tgggccgaga tcaccgatct 300
gtccggtgcg aaaattgctg 320

<210> 468
<211> 303
<212> DNA
<213> Mycobacterium tuberculosis

<400> 468
gcttttcccg tccgtcnncg ctcaaccgcg tgaggccgaa gcgnttggtt acgactccct 60
gtttgtgatg gaccattct accaactgcc catgttgggg acncccgacc agccgatgct 120
ggaggcctac acggcccttg gtgcgctggc caccggcgacc gancggctgc nnntgggcgc 180
gttggtgacc ggcaatacct accgcagccc gacctgctg gcaaanatca tcaccacgct 240
cgacgtggtt agcgcgggtc gagcgatcct cggcattgga gccggttggt ttganctgga 300
aca 303

<210> 469
<211> 391
<212> DNA
<213> Mycobacterium tuberculosis

<400> 469
 cngcttttta atggccttga cntgggcgng ccggccaccg gggccactcc gcacaatctg 60
 tacccgacca agatctacac catcgaatac gacggcgtcg ccgactttcc gcggtaccgg 120
 ctcaactttg tgtcgaccct caacgccatt gccggcacct actacgtgca ctccaactac 180
 ttcatcctga cgccggaaca aattgacgca gcggttcgcg tgaccaatac ggtcgggtccc 240
 acgatgaccc agtactacat cattcgcacg gagaacctgc cgctgctaga gccactgcga 300
 tcggtgccga tcgtggggaa cccactggcg aacctggttc aaccaaactt gaaggtgatt 360
 gttaacctgg gctacggcga cccggcctat g 391

<210> 470
 <211> 343
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 470
 ctcaagcttg cggggagggt gcatggccga ctcgatttta cccaccangg ggcgccaacg 60
 cgggtgtccgc gccgtcnagc tgaacgttgc tgcccgctg gagaacctgg cgctgctgcg 120
 caccctggtc ggcgccatcg gcaccttcga ggacctggat ttcgacgccg tggccgacct 180
 gaggttggcg gtggacgagg tgtgcacccg gttgattcgc tcggccttgc cggatgccac 240
 cctgcgcctg gtggtcgatc cgcgaaaana cgaantttg gtggaggctt ctgctgcctg 300
 cgacacccac nacgtggtgg caccgggcag ctttagctgg cat 343

<210> 471
 <211> 303
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 471
 ccgacgccgt cgtggccacc aacaccgcga ccagcacctg gaccgggacc ggggtgccgc 60
 gcgaaccggt cttggccaat tgccgcggca ccaagccgtc gcgcgccatg gcgaacagca 120
 cgcgccattg cccgagcatc aacaccatca ccaccgtggt aagcccggcc agcgcgccga 180
 cggagatgat gccgctggcc cagtacaccc cgttggcctg gaacgcggtg gccagatttg 240
 ccggcccgcg gcccggtacg gtccgcagtt ggggtgatgg aaccatgccc gacagcacca 300
 ccg 303

<210> 472
 <211> 264
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 472
 ttactggcc tttggtccac actagacaat actcaagctt ccaggacatc gtcacgcgca 60
 ccaaaaccgc gagctaggtc ggcacccggg aagcatcgcg acaccgtggc gccgagcgcc 120
 gctgccggca ggccgattag gcgggcaaat tagcccgccg cggtccccgg ctccgantac 180
 ggcgccccga atggcgctac cggttggtta ccacgcttgc gcgcctgggc ggcggcctgc 240
 cggatcaggt ggtaaatgcc gaca 264

<210> 473
 <211> 280
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 473
ngacgtcttc catccgcgcg tcgttttggc gggttggcca cagcagcccg ccggtgacgg 60
cgacgatgct gggctgggtg cggccctgcg ccaccgcggc ttgcatgctg gttggctgtc 120
ttgggacgat cccgaaatag tccacgcgga tctgggtgatt ttgcgggcta cccgcgatta 180
ccccgcgcgg ctcgacgagt ttttggcctg gactaccgcg gtggccaatc tgctgaactc 240
gcggccggtg gtggcctgga atgtcgagcg ccgttaccta 280

<210> 474
<211> 153
<212> DNA
<213> Mycobacterium tuberculosis

<400> 474
cttcctcctg agtacnccc gtntactttg ggatgggtaa aaaggcgaat cncgtttgg 60
tcacgaacgc cgggagggac aatctcgggc ggctggggcc tctcgcgga angcccgaat 120
gtacggtgtc tcgacacttc cntccccct ccg 153

<210> 475
<211> 247
<212> DNA
<213> Mycobacterium tuberculosis

<400> 475
gagcatcggg acntacggag tcaactacce ggccaacggt gatttcttgg ccgccgctga 60
cggcgcgaac gacgccngcg accacattca gcagatggcc agcgcgtgcc gggccacgag 120
gttggtgtc ggcggctact cccagggtgc ggcntgatc nacatcgtca ccgccgcacc 180
actgccggc ctcgggttca cgcagccgtt gccgcccnca gcggacgatc acntcgccgc 240
gatcgcc 247

<210> 476
<211> 264
<212> DNA
<213> Mycobacterium tuberculosis

<400> 476
tactcatgan catcctttaa tcanngcttt gcgttttttt attaaatctt gcaatttact 60
gcaaagcaac acaaaaatcg caaagtcac aaaaaaccgc aaagtgtgtt aaaataagag 120
cancactaca aaaggagata agaagagcac atacctcagt cacttattat cactagcgct 180
cgccgcagcc gtgtaaccga gcatagcgag cgaactggcg aggaagcaaa gaagaactgt 240
tctgtcagat agctcttacg cnca 264

<210> 477
<211> 264
<212> DNA
<213> Mycobacterium tuberculosis

<400> 477
ctcaagcttc aggtcaatgt gcnccaagcc ctgacgctgg ccgaccaggc caccgcgcgc 60
gganacnctg ccaaggccac cgaatacaac aacgcgcgcg aggcgttcgc ancccagctg 120
gtgaccgcgc agcanancgt caaaaacctc aagacgctgc atgaccaggc gcttancc 180
gcanctcagg ccaagaaggc cgtcnaacga aatgcgatgg tgctgcacca naagatcgcc 240
gagcgaacca agctgctcag ccng 264

<210> 478
<211> 352
<212> DNA
<213> Mycobacterium tuberculosis

<400> 478
catggtggca ctgtagcgac gtgctgcaat caaggtcatg cccgactctg gtcagctcgg 60
anccgctgac accccgctaa ggctgctcag ctcggtgcat tacctcaccg acggcgaact 120
ccccagctt tacgactatc cggatgacgg cacctggttg cgggcgaact tcatcatcag 180
cttggacggc ggcgctaccg tcgatggcac cagcggggcg atggccgggc ccggcgaccg 240
attcgtcttc aacctgttgc gtgaacttgc cgacgtcatc gtggtcggcg tgggcaccgt 300
gcgcattgag ggctactccg gcgtccggat ggggtgcgtc cagcgccagc ac 352

<210> 479
<211> 207
<212> DNA
<213> Mycobacterium tuberculosis

<400> 479
tactcaagct tgcgggtgat cgccttggtc aacggcaccg tgatcggatc ggggtcnacc 60
gcacaaatgg actggagctt cggcgaantc atcgccatg cctcgcgggg ggtgacgctg 120
accccggggtg acntgttcgg ctcgggcacg gtgcccacct gcacgctcgt ctatcacctc 180
nggccaccgg aatcattccc gggctgg 207

<210> 480
<211> 256
<212> DNA
<213> Mycobacterium tuberculosis

<400> 480
gttgngcct cgtcggcgaa cagttctcgc acgatttccg gattagcggg actggtcacc 60
agttgggtat gcgggaaggc gctgacgttc gccgcgatta gctgtttgat ggacgcggtg 120
gtgatgttct gatcacgaa ctggctgtaa tagcccaggg tcgccacgct ttcattccggg 180
cccgaccg gcgcaccgag cgtgtcgcgc aggtatgcga cgtgattttc gctgaagtcc 240
ccgtaccg agaact 256

<210> 481
<211> 397
<212> DNA
<213> Mycobacterium tuberculosis

<400> 481
tgcttcggc tcgtatgttg tgtggaattg tgancggata acaatttcac acaggaaaca 60
gctatgacca tgattacgcc aagctattta ggtgacacta tagaatactc aagctccagg 120
tcaatgtgcy ccaagccctg acgctggccg accaggccac cgccgcccga gacgtgcct 180
ttgtcaccga atacaacaac gccgccgagg cgttcgcagc ccagctggtg accgccgagc 240
agagcgtcga agacctcaag acgctgcatg accaggcgt tagcgccgca gctcaggcca 300
agaatgccgt cgaacgaaat gcgatggtgc tgccgcataa gatcgccgag cgaaccaagc 360
tgctcagcca gctcgagcag gcgaagatgc acgagca 397

<210> 482
<211> 379

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 482

```
caggcatgca agcttcggag gcagaccggt gcatgggtggc actgtagcga cgtgctgcaa 60
tcaaggtcat gcccgactct ggtcagctcg gagccgctga cccccgcta aggctgctca 120
gctcgggtgca ttacctcacc gacggcgaac tccccagct ttacgactat ccggatgacg 180
gcacctggtt gcgggcgaac ttcacagca gcttggacgg cggcgctacc gtcgatggca 240
ccagcggggc gatggccggg cccggcgacc gattcgtctt caacctgttg cgtgaacttg 300
ccgacgtcat cgtggtcggc gtgggcaccg tgcgcattga aggctactcc ggcgtccgga 360
tgggtgtcgt ccatcgcca                                     379
```

<210> 483

<211> 264

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 483

```
tactcaagct tgggggtggcg ctgtcgggtcg gtgtgcttgg cggcgctcgg atcaacaccg 60
cccacgaaat ggggcacaag aaggattcgc tggagcgggtg gctgtccaaa atcaccctcg 120
cccanacctg ctacgggcac ttctacatcg agcacaaccg tggccatcac gtccgggtgt 180
ccacaccgga ggaccggcg tggcgcggtt tcggcnaaac gttgtgggan ttcctgcccc 240
gcantgttat cggcggcttg cgct                                     264
```

<210> 484

<211> 351

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 484

```
ggccatcgcc accgcncgcg ggcgaacgct caaaggcacc tactggcacc aaggccccac 60
acgtcaccct gtgacctcct gcgccgaccc cgcccgaggt cctggccggt accaccgaac 120
gggcgagccg ggagtctggt acgcatcgaa caaagagcaa ggtgcatggg cggagttggt 180
ccgccacttc gtcgatgacg gggtcgatcc attcgaggtc cgtcgccgcg tcggtcgagt 240
ggcggtcaca ctccangtac tcgacctcac agacgagagg actcgatccc atctaggtgt 300
ggacgaaaca gatcttctgt ccgacgacta caccaccacc caggccatcg c 351
```

<210> 485

<211> 328

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 485

```
gcttgcggtt gatcgcttgg gtcaacggca ccgtgatcgg atcggggctcn accgcncaga 60
tggactggan cttcggcgaa ntntcgcct atgcctcgcg gggggtgacc ctgaccccg 120
gtgacntggt cggctcgggc acggtgcccc cctgcacgct cgtcaagcac ctcnngccac 180
cggaatcatt cccgggctgg ctgcacnacg gcgacntggt cncctccag gtcgaagggc 240
tgggcnaaac aangcagacc gtccggacaa ncggcactcc ttttcggtg gctcttcggc 300
cgaatccgga cgccnaacc gaccggcg                                     328
```

<210> 486

<211> 344

<212> DNA

<213> Mycobacterium tuberculosis

<400> 486

```
gtttctcgac gatttccgga ttagcgggac tggtcaccag ttgggtatgc gggaaggcgc 60
tgacgttcgc cgcgattagc tgtttgatgg acgcggtggt gatgtnctga tcacggaact 120
ggctgtaata ncccagggtc gccncgcttt catccgggcc cggacccggc gcaccgagcg 180
tgtcgcgcag gtatgcgacg tgattttcgc tgaagtcccc gtacccggag aactcgaaca 240
cgctgaggcg ctgcgtcaccg tcgtnnccggc gaccaagcgc ggcgagcaac tgcgcaaaat 300
cgttaagana ggtcgaatcg ttgaaattcg gcaccacctg cacc 344
```

<210> 487

<211> 285

<212> DNA

<213> Mycobacterium tuberculosis

<400> 487

```
cacaagacaa tactcaagct tcaggtcaat gtgcnccaag ccctgacgct ggccgaccag 60
gccaccgccg ccgganacgc tgccaaggcc accgaatata acaacgccgc cgaggcggtc 120
gcagcccagc tggtgaccgc cgagcananc gtcnaaaacc tcaagacgct gcatgaccag 180
gcgcttancc ccncagctca ggccaagaag gccgtcgaac gaaatgcgat ggtgctgcag 240
canaanatcg ccgancgaac caagctgctc agccagctcg agcag 285
```

<210> 488

<211> 280

<212> DNA

<213> Mycobacterium tuberculosis

<400> 488

```
ccaccctgac atggtggcac tgtagcgacg tgctgcaatc aaggtcatgc ccgactctgg 60
tcagctcgga gccgctgaca ccccgctaag gctgctcagc tcggtgcatt acctaccga 120
cggcgaactc cccagctttt acgactatcc ggatgacggc acctggttgc gggcgaactt 180
catcagcagc ttggacggcg gcgctaccgt cgatggcacc agcggggcga tggccggggc 240
cggcgaccga ttcgtcttca acctgttgcg tgaacttgcc 280
```

<210> 489

<211> 160

<212> DNA

<213> Mycobacterium tuberculosis

<400> 489

```
gctttccgcc gataccncc atgtcccga catccaggac ttctgggggg atccgctgac 60
agcggcggga tcccaaagtg cggatgatcg ggccgcctac gtcgtggtgt acctcgncgg 120
taacaacgaa accgaancgt atgactcngt ccacgcggtg 160
```

<210> 490

<211> 176

<212> DNA

<213> Mycobacterium tuberculosis

<400> 490

```
caacccgant tggctttcgg cgccttcggt gaggacggcg tgcgggtgct caacgacgac 60
gtcgtccgcg ggacacacct cgatgctgcc gccatggacg cggtcgaacg caagcagctg 120
atcgatctac nacgccngn ggaacgcttc ngccgcgggc gtgaccgcnt cccgtt 176
```

<210> 491
<211> 216
<212> DNA
<213> Mycobacterium tuberculosis

<400> 491
gggatgggca aaaaggcgaa gcaccgctg gccacgaacg ccgggagggga caatctcggg 60
cggctagggc ttctcgcggg aaggcccga cgtacggcgt ttcaacacgt cgcgtcgccc 120
tccgaccgcg aacattcggg gatggcagca acctggtagc accctggccg ggcgatgatc 180
tgccagcgtc cccgcgggta gtcgcccgc gggcgg 216

<210> 492
<211> 163
<212> DNA
<213> Mycobacterium tuberculosis

<400> 492
cagcagacca acaagagcat cgggacatac ggagtcaact acccggccaa cggtgatttc 60
ttggccgccg ctgacggcgc gaacgacgcc agcgaccaca ttcagcagat ggccagcgcg 120
tgccggggcca cgaggttggg gtcggcggc tactcccacg gtt 163

<210> 493
<211> 80
<212> DNA
<213> Mycobacterium tuberculosis

<400> 493
ctcaagcttg actggccacc caccggcatg accaccgaca ggcccgactg gtcgtaccac 60
tcgaacgccg ggggtgttga 80

<210> 494
<211> 248
<212> DNA
<213> Mycobacterium tuberculosis

<400> 494
ttggtgcccc gaatggcgag tcccatttan tcgctgattt gtttgaacag cgacgaaacc 60
ggtgttgaaa atgtcgctg ggtcggggat tccctctcca agcaagagta actggcccca 120
aataaagtta ctgctcgtct tgcaaagacc gctaccgat gccatttatg tgtttcctta 180
cgctcnnnt tccggtgcgc catcattatc tgcaccttg cactgcacat tgagcttagc 240
agcgctcg 248

<210> 495
<211> 341
<212> DNA
<213> Mycobacterium tuberculosis

<400> 495
gaattngctt tcggcgccat cggcccagga ccgcgtgcgg gtgctcaacg acgacgtcgt 60
ccgcgggaca cacctcgatg ctgccgccat ggacgcggtc gaacgcaagc agctgatcga 120
gctacaacgc cgcgcggaac gtttcgcgc cgggcgtgac cgcattccgt tgaccgggcg 180

gatcgngtg	atcgtcgatg	acggcatcgc	caccggagcg	acggccaagg	cggcgtgcc	240
ggtcgcccgg	gcgcacggtg	cggacaaggt	ggtgctggcg	gtcccgatcg	gccagacga	300
catcgtggcg	agattcgccg	ggtacgccga	tgaagtgggtg	t		341

<210> 496
 <211> 420
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 496						
taaagctttc	gtcagttcat	ngngcccccg	gaccaacaaa	agcatcggga	catacggagt	60
caactacccc	gccaacggtg	atttcttggc	cgccgctgac	ggcgcnaacg	acgccagcga	120
ccacattcag	cagatggcca	gcgcgtgccg	ggccacgagg	ttggtgctcg	gcggctactc	180
ccagggtgcg	gccgtgatch	acatcgtcac	cgccgcacca	ctgcccggcc	tcgggttcac	240
gcagccgttg	ccgcccgcag	cggacgatca	cntcgccgcg	atcgccctgt	tcgggaatcc	300
ctcgggccgc	gctggcgggc	tgatgagcgc	cctgaccctt	caattcgggt	ccaanaccat	360
cnacctctgc	aacaacggcg	accgatttg	ttcggacggc	aaccggtggc	gancgcacct	420

<210> 497
 <211> 135
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 497						
ccgggagggg	ccatncggg	cggctncggc	ttctctccgg	aaggttctan	ngtnnngcgt	60
ttcnacnctt	cccgtcgccc	tgcgaccgcc	gaacattcgg	ggtatggng	cancctgtna	120
gcatecnggc	cgggc					135

<210> 498
 <211> 277
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 498						
ctcaagcttc	cgcacagat	cgctatagaa	ccggtgcgcg	tccccaccga	gtggctggtc	60
gccttcacgc	acgatcgtaa	ccgcgttatc	ggaatcaaac	tcnccgaaca	cctgaccaac	120
gcgcttgatc	gcctgaatcg	atgcggcgctc	gctggggctc	atcgataccg	agtgtgcttt	180
tccgaccact	tccagttgcg	gtacggcgag	attgacaaa	gcggtgaagc	ccagccagag	240
caggacgatc	accnccgcaa	accggcggat	ttgcccc			277

<210> 499
 <211> 323
 <212> DNA
 <213> *Mycobacterium tuberculosis*

<400> 499						
gcttggcagc	ctgcggctgg	gcgccctnga	gctcttcgat	ctggatctcc	ggactcgaga	60
tgctcacttg	cccggccgtg	gacgtaccca	ttgcggcccg	gacccacgag	ccccaggtga	120
ccagcgagtt	gggctgcacg	ctgaccggcc	cgtcggggctc	gacgcgggta	acggtcagca	180
gctccgangt	connctgatc	ccgaccgcag	ctgccaatgc	gcggctggca	gccgacgtgg	240
atgtgccggg	gcctagatcg	cggggcgagca	gcgagaccgc	gtcaccgacg	gtcatcacct	300
tgccgagttt	nggcctgccc	can				323

<210> 500
<211> 148
<212> DNA
<213> Mycobacterium tuberculosis

<400> 500
gcttccggct cgtatgttgt gtggaattgt gagcggataa caattncaca caggaaacag 60
ctatgaccat gattacgcca agctatctag gtgacactat agaataactca agcttgagcc 120
atcgggctat cagctgggtg atgtcccg 148

<210> 501
<211> 242
<212> DNA
<213> Mycobacterium tuberculosis

<400> 501
caggcatgca agcttgctgt ctatcacatc cgaccaccaa ccgcccgcgc gctcggcaga 60
acgcctccgc atatgggtcg acgaccagcg ggtcggactt ctgggctgcc agcgctcgcg 120
ccgtcgcgac aaacagcgcg gtcgaaccga cactccttgt gatgtccac ctatcacctt 180
cggtagcgac ccaatcgacc ctacgcggct agctcagccc cgatcttcca gagctccgcc 240
cg 242

<210> 502
<211> 230
<212> DNA
<213> Mycobacterium tuberculosis

<400> 502
gctttttgag cgtcgcgcgcg ggcggcttcc ccggcaattc tactagcgag aagtctggcc 60
cgatacggat ctgaccgaag tcgctgcggt gcagcccacc ctattggcg atggcgccga 120
cnatggcgcc tggaccgatc ttgtgccgct tgccgacggc gacgcggtag gtggtcaatt 180
ccggtctacg cttgggcctt tgcggacggt cccgacgctg gtcgcggttg 230

<210> 503
<211> 235
<212> DNA
<213> Mycobacterium tuberculosis

<400> 503
cgancctggt cgacggctac ctgaatcacc ccgatnccac cgccgcggcg ttcgacgcgc 60
acagctggta ccgcaccggc gacgtcgcgc tggtcgacgc cagtgggatg caccgcatcg 120
tgggacgcga gtcggtcgac ttgatcaagt cgggtggata ccgggtcggc gccggtgaaa 180
ttgaaacggt gctgctcggg catccggacg tggcggaggc ggcagtcgtc ggggt 235

<210> 504
<211> 152
<212> DNA
<213> Mycobacterium tuberculosis

<400> 504
naagctttgt cacaccaagt gtttcnacca gncgctccat ccggcgaagt ggatactccc 60
agcaggtagc aggtcgccac cacgctggtc agtgcgcggt cagctcgctt gcggcgctgc 120

agcagccagt ccgggaaata gctgccctgg cg

152

<210> 505

<211> 192

<212> DNA

<213> Mycobacterium tuberculosis

<400> 505

```
cgctggncgc cggcgctggg ctgcggtaac caattaccac aacacttttc ggtagccgaa 60
cagcggcgcg taccagcgaa atggcacagc caccgcagtc gccgacatcc cgcaagatg 120
tggcagattt tcgtgcggtc gagccggcga aggcctagcg tcattgttgc ctggcaaggt 180
tgctgggccc gg                                     192
```

<210> 506

<211> 312

<212> DNA

<213> Mycobacterium tuberculosis

<400> 506

```
ctcaagcttc ttctgccct tgcggttncg gatnacatcc cgcagcgact cggcttcggc 60
gtcgaatgct aagttctcga tcagcttctg gatcgactcc gcgccatgg caccggtgaa 120
gtactcgccg tagcggtcga cnagttcgcg gtagaggttt tcgtcnacna tcagctgctt 180
gggcgccanc ttggtgaaag tgctccaaat gtcctccaac cgggccagct cacgctgcgc 240
gcggtcacgg atctggcgca tctcgcgctc gccgcgctcg cgaacttgcg ccgcgcatcg 300
gccttggggc cc                                     312
```

<210> 507

<211> 296

<212> DNA

<213> Mycobacterium tuberculosis

<400> 507

```
gttcacacct acctactatg ccncaattcn ccgacacggg tggcatcaac acgggcgata 60
aggtggaaat cgctgggggtg aacgtcgggc tgggtgcgctc gctggcaatc cgcggaacc 120
gcgtgttgat cggattctcg ttgcccgga agacaatcgg gatgcaaagc cgggcagcaa 180
ttcncncna caccattctt ggccgtaaga acctggagat cgaaccccg gcgttcggagc 240
cgttgaaacc caacggtttc ctgccgttgg cgcanaccac tacgccatac caaatc 296
```

<210> 508

<211> 208

<212> DNA

<213> Mycobacterium tuberculosis

<400> 508

```
ctcaagcttt acgccgacgc cggcctacac aacaccaagg aaacgattgc ctactgccga 60
atcggggaac ggtcctcgca cacctggttc gtgttgcggg aattactcgg acacaaaac 120
gtcaagaact acgacggcag ttggacagaa tacggctccc tgggtggcgc cccgatcgag 180
ttgggaagct gatatgtgct ctggaccc                                     208
```

<210> 509

<211> 278

<212> DNA

<213> Mycobacterium tuberculosis

<400> 509

```
tccncatgg gataacgggt ttagatttcn acaacggcac cgtgtttctc aacaagccgg 60
tcatcagctg ggccggcgac aacggtatct acttcacccg ctttcgcccg tacaagaaaa 120
accactagge caccatcgag tccaagaaca accacctggt ccgcaagtac gcgttctact 180
accgctatga caccgccgag gaacgcgcgc tgctcaaccg gatgtggaag ctggtcaacg 240
accgcctcaa ctacctcacc ccgaccatca aaccgatc 278
```

<210> 510

<211> 177

<212> DNA

<213> Mycobacterium tuberculosis

<400> 510

```
ctcaagcttg ggtggtgccc atcacccgaa gccncatgat cagccacggt tcgcgcgcgc 60
cggcatacgg cggcgtagcg atctccgcgt catacacccg cgggtaatcg ccgacgggtgc 120
cggttcgcga gccgaagggt acaacgctga ttgaatcnag ttccangtcc agcgggt 177
```

<210> 511

<211> 296

<212> DNA

<213> Mycobacterium tuberculosis

<400> 511

```
tnaacagctc gcggcagccc acgacctgct gcgtcggatt gccggcggcg agatcaattc 60
caggcagctc ccggacaatg cggctctgct ggcccgcac gaangactcg aggtcacccc 120
ggtgccgggg gtcgtggtgc acctgccgat cgcacagggt ggcccacaac cggccgcttg 180
atgnnnngtc ggcaagcccg gcagtngcca aaccacgcgt gatcangctc ggctcgcgag 240
ttcggcgaan aagtggctcg cctgatcacc taccatcggc cangatctgc gtgtca 296
```

<210> 512

<211> 223

<212> DNA

<213> Mycobacterium tuberculosis ~

<400> 512

```
gccanccggc ttggcgtcga ctcccgttcn gcacatcata cgggtccccg tactgtccaa 60
ctgcgcgggt gcgctagcca aacgtcacga ctctcagtga tcccagttcg tgatccggcc 120
ggtggcgccg ctgcggcggg ggctnatnta cttcggactn attatctcat ccaaaggaca 180
ccgggcgggt ggctggaatc ccatggtgcg atcggccaca can 223
```

<210> 513

<211> 147

<212> DNA

<213> Mycobacterium tuberculosis

<400> 513

```
ccgacctggt atcttccgat agcgcgcggt gatatccggt ctgatctcct gcccttaacg 60
ccggatctca gcaggctccc atgcaaagat ccgaggtgtc ccngatctag gggctcctcg 120
cctccagatg atggagcaag tcggccc 147
```

<210> 514
<211> 149
<212> DNA
<213> Mycobacterium tuberculosis

<400> 514
ctcaagcttc ggctcaggcg gcgctgccgg taacgtcgct gaccgggtgca ggtttcgaca 60
atgtggtgcc ggttcggcgg ctacgtgcc tcaagacact ggcgaggct atcgaccccg 120
ttatcggcta caaacaatc gcggtatgc 149

<210> 515
<211> 238
<212> DNA
<213> Mycobacterium tuberculosis

<400> 515
catcacctgn ttcatgaact ggaagcaccg cagcgcttcc ttttcggccg caacatgagc 60
cagcctctcg tcggcggtcg ggtgcagggtg ctccggcagc tcggccgcga cagccgcctg 120
accctgaaac cagcttccat atcccgcgac gaacgacgcc agtccgctac gtaaccctc 180
cgcgactgtc catggacaac agcgcgttct ccaccgaccg ggcccgggtg tgggggtgt 238

<210> 516
<211> 175
<212> DNA
<213> Mycobacterium tuberculosis

<400> 516
agcttagctt cccgccccgg caatagggtc ccagctcatc cgggtgtgacc agataggggc 60
ccagggtgat accgctgtct ttgcccttgg cctgtccgat gcgcagctgg ccctccagca 120
tctgcaggtc ccgtgcggac cagtcggtta aaatggtata gccgatgatc gaccg 175

<210> 517
<211> 144
<212> DNA
<213> Mycobacterium tuberculosis

<400> 517
ccngaacaga agcggngggt cctaccgcgg tgtgcggccg gcgcgatatc ggccttttta 60
ctaaccgaac ccgatgtggg ctccgatccg gcgcgatgg catcgacggc gacgccgatc 120
gatgaccgcc aggcttacca cctt 144

<210> 518
<211> 174
<212> DNA
<213> Mycobacterium tuberculosis

<400> 518
ctcaagcttg cgcgactcga caagcattct tgacagttgt tttggctcgg catggtttagc 60
caaggttctg cggtcaccac agatcatctt ggtccggtag cgctcgtccg ggtatgctgc 120
cgccgggatt ctgctgcta ttaactcccc cgaagaacgc caccggtcca gcgc 174

<210> 519

<211> 187
<212> DNA
<213> Mycobacterium tuberculosis

<400> 519
gcnaggcggt atagcttccc gtcgtaccg cgaccgccag ccgagaagct cgttttccca 60
gtgttgctgg ggattctcac gctgctgctg agtgcggtcc agaccgcttc cgcttcgggt 120
tacaacgagc cgcggggcta cgatcgtgcg acgctgaagt tgggtgttctc catggacttg 180
gggatgt 187

<210> 520
<211> 215
<212> DNA
<213> Mycobacterium tuberculosis

<400> 520
gtgtggaacc gtgagcggat aacaatttca cacaggaaac agctntgacc ttgattacgc 60
caagctatatt aggtgaggct atattaatac tcaagattgc ggtcgagcac atcggcccaa 120
gaaccgccga aggcacggcg gaacgcctgc ggcacatggg gcgacgacca gcgggtcgga 180
cttctgggct gtccagccgg atcgcgccgt cgca 215

<210> 521
<211> 406
<212> DNA
<213> Mycobacterium tuberculosis

<400> 521
cactgtcagt acatatgcgc cgctcctcct catcgtgctg ctcggcatcg tcgccggcg 60
tcatggcgct accctaccca agccgaacgc gaaacgagaa cgtgttccat tattaggggtg 120
tgagcaccaa taccagattg ctaccagga actcacgcag caccgggacg gatgtcagcc 180
accacgcccc tctgggggtg tagcggggaa atacggctaa cgcggtccg gtgccggcag 240
cccagcgcag accctcggcg gcggacacgg caaacaacga cgaccatag ttgttctttg 300
ccggatggcc gtgtttgcgg acatatcggt cgggcgcgcg ggcgcgcgcg aggtagtggc 360
tgaggcccat ctctgtcccc ccgaatggcc ccagccaaac cgtgta 406

<210> 522
<211> 180
<212> DNA
<213> Mycobacterium tuberculosis

<400> 522
ctcaagcttt tacggtgatc ggcgatcacc tggttcatga actggaagca gcgcagcgct 60
tccttttcgg cgcaacatg agccancctc tcgtcggcgg tcgggtgcag gtgctcgggc 120
agctcggccg cgacagccgc ctgaccctga aaccagcttc catatcccgc gacnaacgac 180

<210> 523
<211> 69
<212> DNA
<213> Mycobacterium tuberculosis

<400> 523
ctcagaagcc gctagctggg agatcgctg accggtgcac gtggcgnaaa tgtgcgctgc 60
cggttcgcg 69

<210> 524
<211> 168
<212> DNA
<213> Mycobacterium tuberculosis

<400> 524
ctcaagcttg cgctcatcaa ggcggaacag cagggcggtc ggctggtcgc catgacgggt 60
gacgggacca atgacgcacc cgcgctcgcg caagccgatg tcgggggtggc natnaatacc 120
ggcaccagc cggcccggga agccggcaac atggtcnatc tccactcc 168

<210> 525
<211> 83
<212> DNA
<213> Mycobacterium tuberculosis

<400> 525
acttctatct cgactgggtg gctgtggcgc gatccgactg ccggcgtggt caaggccggc 60
cagttgtggg atnccacagc cac 83

<210> 526
<211> 173
<212> DNA
<213> Mycobacterium tuberculosis

<400> 526
gcttgtcgta ttccgtggca ctgtcagaca tatgcgccgc tcctcctcat cgctgcgctc 60
ggcatcgctg ccggcggtca tggcgtcacc ctaccaagc cgaacgcgaa acgagaacgt 120
gttcattat taggggtgtga gcaccaatac cagattgctc accaggaact cac 173

<210> 527
<211> 38
<212> DNA
<213> Mycobacterium tuberculosis

<400> 527
cgatattcgt cggccgcggt gtctcgactg ggctcgct 38

<210> 528
<211> 136
<212> DNA
<213> Mycobacterium tuberculosis

<400> 528
gacctcggcc accaagccgg acgcgaccgt cgaggtggcg atccggcttg gcgtcgacct 60
gcgtaaggca gaccacatgg tccgcggcac ggccancctg ccacacggca ctggtaagac 120
tgcccgcgtc gcggcn 136

<210> 529
<211> 114
<212> DNA

<213> Mycobacterium tuberculosis

<400> 529

```
ccggaagtct aggggacgac ctactcagcg caaaatgtcg ctaatgtgag tccgccccac 60
cagggcagat caacccatgt cgatgatgac ctacccgat accggattgg cggt      114
```

<210> 530

<211> 119

<212> DNA

<213> Mycobacterium tuberculosis

<400> 530

```
agcttcagtt cctccacgac gcgttcccaa atgaatttcc cgatcccaca atctcggttc 60
agatacaggt cgccataccc cttacttcgg naacgctggg cggattggcc ctgccgctg  119
```

<210> 531

<211> 99

<212> DNA

<213> Mycobacterium tuberculosis

<400> 531

```
ccgcctacgg gtcgaacatg catcccgaga ccgatgctcg agcgcgcacc ccactcgccg 60
atggccggaa ccggctggtt acccggttgg cggctgacc      99
```

<210> 532

<211> 308

<212> DNA

<213> Mycobacterium tuberculosis

<400> 532

```
gcggctggtt acgactccct gtttgtgatg gaccacttct accaactgcc catgttgggg 60
acgcccagacc agccgatgct ggaggcctac acggcccttg gtgcgctggc cacggcgacc 120
gagcggctgc aactgggcgc nttggtnacc ggcaatacct accgcagccc gacctgctg 180
gcaaagatca tcaccacgct cgacgtgggt agcgccggtc gagcgatcct cggcattgga 240
gccggttggg ttgagctgga acaccgccag ctcggttcg agttcggcac tttcagtga 300
cggttcan      308
```

<210> 533

<211> 328

<212> DNA

<213> Mycobacterium tuberculosis

<400> 533

```
gcctttccgc acaatctgta cccagagacc ntctaaaaaa tcgaatacga cggcgctcgcc 60
gactttccgc ggtaccgct caactttgtg tcgaccctca acgccattgc cggcacctac 120
tacgtgcact ccaactactt catcctgacg ccggaacaaa ttgacgcagc ggttccgctg 180
accantntg tcggtccac gatgaccag tactacatca ttgcacgga gaacctgccg 240
ctgctagagc cactgcgac ggtgccgac gtggggaacc cactggcgaa cctggttcaa 300
ccaaacttga aggtgattgt taacctgg      328
```

<210> 534

<211> 75

<212> DNA
<213> Mycobacterium tuberculosis

<400> 534
gcagaccaac aagatgcac gggatcatac gccgtcaact acccggccaa cggtgatttc 60
ttggccgccg cccac 75

<210> 535
<211> 319
<212> DNA
<213> Mycobacterium tuberculosis

<400> 535
ctcaagcttg ccaaagagac ctcgccacc aagcnggacg cgaccgtcna ggtggcgatc 60
cggcttggcg tccaccgcg taaggcanac canatggttc gcggcacggt caacctgcc 120
cacggcactg gtaanactgc ccgcgtcgcg gtattcgcg ttggtgaaaa ggccgatgct 180
gccgttgccg cgggggcgga tgttgtcggg agtgacaatc tgatcganag gattcagggc 240
ggctggctgg aattcgatgc cgcgatcgcg acaccggatc agatggccaa agtcgggtcnc 300
atcgctcggg tgctgggtc 319

<210> 536
<211> 312
<212> DNA
<213> Mycobacterium tuberculosis

<400> 536
ccacggcggtg gatcaaggta ccggccggga tgttgcgcaa tggcagggtg ttgcccggct 60
tgatgtcggc gttagcgccg gattccacca catccccttg cgaaagtccg ttgggtgcaa 120
tgatgtagcg cttctcccca tcgagatagt ggagcaacgc aatccgtgcg gtacgggttcg 180
ggtctactc gatgtgcgcg accttgccgt tgacaccatc tttgtcattg cggcgaaaagt 240
cgatcatccg gtaagcgcg ttatgaccgc cgcctttgtg ccgggtggta atccggccat 300
gcgcgttgcg tc 312

<210> 537
<211> 105
<212> DNA
<213> Mycobacterium tuberculosis

<400> 537
ggcggctgcg tcggcgagat gatcgcccg tgccaccccg atccgtgcct cggtcagcgc 60
caacgtgctt tccggtccg cgaccacat gtcgcatgcg ccgac 105

<210> 538
<211> 144
<212> DNA
<213> Mycobacterium tuberculosis

<400> 538
gcaatgcct tggcggtcgc cgggttgta cgggtgatca tncggngcg gatgctcatn 60
cggcgcatth cgtcnaatcg ttcccgatg cccacctga cgatgtcctt catatggacc 120
acgccgatgg ccnccgcgt notg 144

<210> 539
<211> 431
<212> DNA
<213> Mycobacterium tuberculosis

<400> 539
ccggctcgta tgttgtgtgg aattgtgagc ggataacaat ttcacacagg aaacagctat 60
gaccatgatt acgccaagct atttaggtga cactatagaa tactcaagct tccacatcgg 120
tatgccaaag cattgcgccc ctatcgattt cgcgctggca tcgccaaggt ggacttcttg 180
ctcagcgacg agatcccgtg gtcggatccg cggctgcggc gggctgcgac cctgcatctc 240
ggcggcaccg gtgaccagat ggcgcgcgcc gaggcagacg tcgcggcggg acgccacgcc 300
gactggccga tgggtgtggc cgcgtgtccg cacgtcgccg accccggccg catcgacgaa 360
accggccgcc gtccgttctg gacctatgcc cacgtgccgt cggggtccac gctcgacgcg 420
accgagaccg t 431

<210> 540
<211> 462
<212> DNA
<213> Mycobacterium tuberculosis

<400> 540
cgcgtccacc gcagcgtgag attggtggcg ccattcgtcg tgggtgtagct gctggtggcg 60
gcgtcgccgt attgtgcggg ccagccttgt gcgggggccc cttctaccca cgagtcggca 120
cttcgcgaac cgcccagctc gaccgcgatt acggcggccg caacggccgc cggaaggcgt 180
ctcgcaagcg ccttatacct tgcgaggttc ccagatcctt ccgctacgtg ggtcgctcat 240
cggcggggccc ggccgaatga gtacaggtga gggtaaccgc taaaaatgaa gttggtcagt 300
gctggccaac tgtgtaatgg ttgcccggct cgggtcacca cgtacattct ggcaaggcgg 360
gcgagattcg gttcctcgcg tccttggccg gtggcggttc ccggttgtcc gtgggcgtgt 420
cgtgtacgtg gtgtaagtgt cgtgaactcc tcagtttggg ct 462

<210> 541
<211> 307
<212> DNA
<213> Mycobacterium tuberculosis

<400> 541
ctcaagcttg cgctggatct ggcggctgag cctgttcttg ggcaacatgc cgagggatcg 60
ccttttccac cacgcggctg ggggtggcgtt gcattagctc accgatggtg cgcttgtgca 120
ggccgcgggg ataccccgag tgccggtaaa ccattctgtg ctgcagtttg tcgccgctga 180
tggcgacctt gtcggcggtt atcacnatga cnaagtcacc gccatcgaca ttgggggcga 240
acgtcggctt gtgcttgccg cgcagcaggt tggccgcccg gacggcaagg cggccaanca 300
ccacgtc 307

<210> 542
<211> 333
<212> DNA
<213> Mycobacterium tuberculosis

<400> 542
tttgggatgg gcaaaaaggc gaagcncgcg gtggccacga acgccgggag ggacaatctc 60
gggcggctag ggcttctcgc gggaaggccc gaacgtacgg cgtttcaaca cgtcgcgtcg 120
ccctccgacc gcgaacattc ggggatggca gcaacctggt agcaccctgg ccgggcgatg 180
atctgcagcg tcgccgcggg tagtcgccgc ccggggcggt acagtctgaa acgcgatgac 240
catcgatgtg tggatgcagc atccgacgca acggttccta cacggcgata tgttcgcctc 300

gctgcgccgg tggaccggtg ggtctatccc gga

333

<210> 543

<211> 234

<212> DNA

<213> Mycobacterium tuberculosis

<400> 543

```
ctcaagcttc gtcataagac catggtgcgc tttctttcac ccgtccanag tcgggggcat 60
ccgcaccggc tcgcatcgca tcctctctcc acgacgggcc gctcatcagc ttggggccatt 120
tcaatgtact tgataccccg cgctgcgggt agggccactgc nacaattcaa acacggtgtc 180
acacggtgaa tantgtcnan atgggctctg atcaaccgtc ncaaaccggc tttc 234
```

<210> 544

<211> 440

<212> DNA

<213> Mycobacterium tuberculosis

<400> 544

```
gaattctgcg tgcaccgcta tgggttgagc cagcggtctg cgccgcacac cccactggcc 60
cgggtgtttt cgccccgaac ccggatcatg gtgagcgaaa aggagattcg cctgttcgat 120
gctgggattc gccaccgcga ggccatcgac cgattactcg ccaccggggg gcgagagggtg 180
ccgcagctcc gctccgtcga cgtctccgac gatccatccg gcttccgccc tcgggtggcg 240
gtagccgtcg atgaaatcgc tgccggccgc taccacaagg tgattctgtc ccgttgtgtc 300
gaagtgcctt tcgcgatcga ctttccgttg acctaccggc tggggcgctc gcacaacacc 360
ccggtgaggt cgtttttgtt gcagttgggc ggaatccgtg ctctgggtta cagccccgaa 420
ctcgtcncgg cgggtgcgcgc 440
```

<210> 545

<211> 425

<212> DNA

<213> Mycobacterium tuberculosis

<400> 545

```
gcagttggga atcgctctgc agcaaaccan tattctgcgc gacgttcgag aggactnttt 60
gaatggacgg atctacctgc cgcgcgacga gctggaccga ttaggcgtac ncctccgcct 120
ggacgactcc ggggcactcg atgacccga cggacggctc gcggcactgc tgcggttcan 180
tgccnaccgc gccgcanact ggtattcgct gggactgcgg ctgattccac acctcgaccg 240
ccgcagcgct gcctgctgtg cggccatgtc tggcatctac cgccgtcngc tcgccttgat 300
cagaccatcg ccggcggtcg tctaccatcg gcgaatctct ctgttcggga ctgaanaang 360
cccaagtggc ggcggcagca ctggnctctt cggtaacctg cngaccgccc attggaccgc 420
taccg 425
```

<210> 546

<211> 401

<212> DNA

<213> Mycobacterium tuberculosis

<400> 546

```
ttgatctgga cgtctgagac ggtgatcggn ccgaacctga attgtccggt aatgcccagc 60
gcagaaagca nggtggtggc cggggcggtg aanccggcgt cggcggcacc gtcgaagtcg 120
atgtggattg ccggaatggg gatgtccggc acggcggaagc cgtagttcgc ttgtcccgtg 180
aggcccangt ggatgggggg aaggatcgtg gtgtccggga tgataatggg gccgatgccg 240
```



```

ccggttgaag tccagtggat cgggaattcg ggaatcgtga tgccgacgtt caggccgaac 300
aggccctcca agttgcctcg ccacnagatg ccgttgctga agttgccga catgagggcg 360
ccggtgtcca cattgccga attggcgacg ccggtgttg c 401

```

```

<210> 547
<211> 391
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 547
cacgtaggcg ccgtccataa atnactccgc cgcgcttcgc acatcctcgt ancgatcctt 60
ggcgagcagg tcaaccgggc gctgcccgtc naggagccgg tttttggcgt gcagccactg 120
gccgacacct cggggggtaa gcgaatccga gagcaggagg acnaggtcac gaanctgcgc 180
cagccggtcg taccgctcag ggcggatgtc gccggtccgc caccgcgta ccgcccgatc 240
ggacacctgt atgaccggcg cgacntcgac ctgggtgacg ccgaagggtt tcagggcatc 300
nacnatctcg ctggcctcga ccgcccggtc cagggtgacc gccatcgtgg ttctctcgca 360
acttccggtt ctactaccgt aaacgctacc g 391

```

```

<210> 548
<211> 369
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 548
cggggaacgg tcctcgca cctggttcgt gttgcgggaa ttactcggac ancaaaacgt 60
caagaactac gacggcagtn ggacagaana cggctccctg gtgggcgccc cgatcgagtt 120
gggaagctga tatgtgctct ggaccaagc aaggactgac attgccggcc agcgtcgacc 180
tgaaaaaaga aacggtgatc accggccgcg tagtggacgg tgacggccag gccgtgggcg 240
gcgcgtttcg tgcggtgct gggacnctc cgacgagttc accgccggga ggtcgtcgcg 300
tcggccaccg ggcgaatttc cggttcttcg ccgcgccccg ggatcctggg accgcnggcg 360
cgcgctggt 369

```

```

<210> 549
<211> 85
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 549
ctcaagcttt gtccgacaag cgttcccggg cggtcagcaa gcgaacgtcg gttggccac 60
tgcggtcga tattgccgcc aggga 85

```

```

<210> 550
<211> 101
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 550
cgtcagcacg gcgacgtcgc gntacgccga gcagttacac aatcgctctg cagcaaacca 60
atattctgcg cgacgttcga gaggacttct tgattggact g 101

```

```

<210> 551
<211> 458

```

<212> DNA

<213> Mycobacterium tuberculosis

<400> 551

```
ctgcatccgg ctcgtatgtt gtgtggaatt gtgagcggat aacaatttca cacaggaaac 60
agctatgacc atgattacgc caagctatth aggtgacact atagaatact caagcttcgc 120
gcagcggcgg gttgacccgg ttcacgccgt catagctggc caatctggca tcgtcgatca 180
ncatgtggtg ggggggtgacc tcggcgggtga tcgaaatacc ctggtcctta tcccatttca 240
ggatttcgac ggtgcccgcg gccgacgcgt gacagatgtg cacccgggcg ccggcgtcac 300
gggccagcaa ggcgtcgcgg gcgacgatcg attcctcggc ggcccgcggc catcccgcc 360
ggcccagccg cgcgcgccatg ggtccctcgt gcgcgacggc gccgaccgtc agccgggggt 420
cctcggcggtg ctgggcgatc agcacgccca aaccgggtg 458
```

<210> 552

<211> 463

<212> DNA

<213> Mycobacterium tuberculosis

<400> 552

```
ccgacgcgca ctacgtgctg gtgtccaccc gcgacccgca ccggcacgag ctacgcagct 60
accgcatcgt cgatggcgct gtcaccgagg aacctgtcaa tgctcgtcgag cagtactgaa 120
ccgttcggag aaaggccagc atgaacgtca ccgtatccat tccgaccatc ctgcgggccc 180
acaccggcgg ccagaagagt gtctcggcca gcggcgatac cttgggtgcc gtcacagcg 240
acctggaggc cagctattcg ggcatttccg agcgcctgat ggaccgctt tcccaggta 300
agttgcaccg cttcgtgaac atctacgtca acgacgaaga cgtgcggttc tccggcgggt 360
tggccaccgc gatcgtgac ggtgactcgg tcaccatcct ccccgccgtg gccgggtgggt 420
gagcggacac atgacacgat acgactcact gttgcatgcc ttg 463
```

<210> 553

<211> 453

<212> DNA

<213> Mycobacterium tuberculosis

<400> 553

```
tgcttcgggc tcgtatgttg tgtggaattg tgagcggata acaatttcac acaggaaaca 60
gctatgacca tgattacgcc aagctattht ggtgacacta tagaatactc aagcttgccg 120
ggagggtgca tggccgactc ggatttacc accaaggggc gccaacgcgg tgtccgcgcc 180
gtcgagctga acgttgctgc ccgcctggag aacctggcgc tgctgcgcac cctggtcggc 240
gccatcggca ccttcgagga cctggatttc gacgccgtgg ccgacctgag gttggcgggt 300
gacgangtgt gcaccgggtt gattcgctcg gccttgccgg atgccaccct gcgcctgggt 360
gtcgatccgc gaaaagacga agttgtggtg gaggttctg ctgcctgcga caccacgac 420
gtggtggcac gggcagcttt agctggcatt cct 453
```

<210> 554

<211> 466

<212> DNA

<213> Mycobacterium tuberculosis

<400> 554

```
ggaaacaccg ncgccgtcgt ggccaacca accgcgacca gcaccgtgac ccggaccggg 60
gtgccgcgcg aaccgggtctt ggccaattgc cgcggcacca agccgtcgcg cgccatggcg 120
aacagcacgc ggcattgccc gagcatcaac accatcacca ccgtggtgaa cccggccagc 180
gcgccgacgg agatgatgcc gctggcccag tacaccccggt tggcctggaa cgcgggtggc 240
agatttgccg gcccgcgggc cggtagggtc cgcagttggg tgtatggaac catgcccagc 300
```

```

agcaccaccg ataccgcgac gtagagaagg gtcacgaccc ccagcgacgc gagaatccct 360
cgaggggacgt ctcgttgagg acgcttggtc tcctcggcca tggtagccac gatgtcaaac 420
ccgataaacg cgaagaacac gatcgatgcc cggccagcac gccgta 466

```

```

<210> 555
<211> 466
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 555
cctgcttccg gctcgtatgt tgtgtggaat tgtgagcggg taacaatttc acacaggaaa 60
cagctatgac catgattacg ccaagctatt taggtgacac tatagaatac tcaagcttgt 120
cctcgggctg ggcctcggcc aagaaatcgt cgacgcgggc ctctgtgca atcgcttgg 180
cggtcgcggg gttgtcaccg gtgatcatca cggtagcgat gctcattcgg cgcatttcgt 240
cgaagcgttc ccgatgccc accttgacga tgtccttcag atggacgacg ccgatggccc 300
gcgcgctgct gttatcggtc cattccgcaa cgactagggg tgtccccccg ccggagctga 360
tgccgtcgac aatggcaccg acctcctcag tgggggtggc accgtgatcg caaaaccact 420
tcatcaccgc agccgcggca ccttgcggtt ccgaacggat gcgctc 466

```

```

<210> 556
<211> 467
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 556
ttcgttcgat ggcgccgccc cggctacggt ttgacctgtg ggtgtcgaat tgggggtcaaa 60
ttccgaggtc ggcgcgctaa gagtggatcat cctgcaccgc ccgggggccc aactgcgccg 120
gtcacaccg cgcaacaccg accagctgct gttcgacggc ctgccctggg tatcccgcgc 180
gcatgacgag cagcagaat tcgccgagct gctggcttcc cgcggtgcgg aagtgcgtgt 240
gctgtcggac ctggtgactg aggcactaca tcacagcggg gccgcccgca tgcaggggat 300
cgccgctgcc gtcgacgcac cgcggtcggg actgccgctg gcgcaagaac tttcggccta 360
cctgcgtatc tcgacccaag cangttggcg catgtgctga cgccggcatg acttcaacga 420
actccntcc gacacgccga acgaagtgtc gttgggtgtt cgtatgc 467

```

```

<210> 557
<211> 142
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 557
gcggcgagtg tggtaggtgc cgaacacgaa tccaacgacg cactggcgga gagataccac 60
ttgctgtact ggaagcacgt gctgatgacg tcccgtagaa tgtgcctcgc cgccgtctat 120
cgaaaacagt gagcatgctg cg 142

```

```

<210> 558
<211> 217
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 558
caaccgcgct cggcgcgtct gggccttccg ccggctccgc cgacaattct atctctggat 60
cagcggggct ctccgggccc gcctccgcga actcaacagg ccgcgccttc cggccgaaac 120
attccctagc catatatgat cgcacctcga tacacgatct ggccggcaaca ccgcaaagcg 180

```

tccgacgggc ccaacctccg caattcaggt atccggg 217

<210> 559
<211> 147
<212> DNA
<213> Mycobacterium tuberculosis

<400> 559
gaaggtcggc gaaggtgtgg ctggntgccg atcacgaatc caatgatgca gtggtcggaa 60
gatattagcc acttgctgtt ctggagacag gtgctgatga tctcccgtgg aatgtccctc 120
gactccgtct atcgaaatct gtgaaca 147

<210> 560
<211> 177
<212> DNA
<213> Mycobacterium tuberculosis

<400> 560
tcttgcgtc tgggccattc tcgggtctgc cgacaattct atctctggat ctgtggggct 60
ctcttggcgc gcctcngcga tctcttcang gcgcgccttc cggccgaaac attccctatc 120
catatatgat cgcacctcta tacaccgttt ggcggcaaca ccgcaaagtg tctgtcg 177

<210> 561
<211> 128
<212> DNA
<213> Mycobacterium tuberculosis

<400> 561
agctttacgc tggcgtatca gcgttggggc cgctgccatt tcggtcggcc aacgcgttgc 60
cagctccctg cgctgtcagg gcttgcgcgc caaactggcc accgcaacaa acttggctga 120
gcttgatc 128

<210> 562
<211> 142
<212> DNA
<213> Mycobacterium tuberculosis

<400> 562
ctctatctgg cgtcacattc gcaatcttta gattgcagat atcgataaaa tcacccgcgc 60
gacaagaccg ccatgtcatc ctttcgatgt tatttcgccg gcctggggaa agcgcaacga 120
cgttgccctac acgttccgcc gt 142

<210> 563
<211> 406
<212> DNA
<213> Mycobacterium tuberculosis

<400> 563
agctttncct tgcattctgca ccccgatcca cgtcagccac gtcggcgcttc tccaccaaga 60
agttgcgggc atttctcttg ccctggccga gctgctcgcc ctctgtaggtg aaccaggcac 120
ccgacttgcg gatgaggccc tgatccacac ccatgtcgat cagcgagccc tccctgctga 180
ttcccttgcc gtagaggatg tcgaactcgg cctgcttgaa ggggggcgaa cagttgtgca 240

```

cgacaacccc ttccggcgacg aggggtgtgca gttcctcgac ctccgaggtcg aacgttcgtg 300
cccgcgcggt tggcagcact tctcggatca cggaatagcg ganttcctcc gccagcatgt 360
cgtgcaggaa tttgtcatcc agggcatccg cgagcgcctg cacgcg 406

```

```

<210> 564
<211> 311
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 564
actgtcnagg gaatgcttcg cagcatctac ctgcagtcgc ttgtgcataa gcggacggcc 60
cnacctgttc gtgttcctggg acaccagacg cgggagcacc ggcagtacgg cgaaagggtt 120
gagcgggaagg agttgcgcaa atcggggcgc cccaacaccc gtccgcaaga cgcgggtcaac 180
gacctgtttc aggcgatcag ggtcaccgac tcacctgcac tgagaacaag cgatctgctg 240
atctgccaga agatggacat gaatgtccac ggcaagcctg atggcctgcc gctcttcctg 300
gaatgttttg c 311

```

```

<210> 565
<211> 310
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 565
tgaattatga tcccgcacaca actgcatcan tttagccgcg tcgngatgct atccgccgac 60
ggttttganc nggtccgtgt cgttcgtggt gatctcacc gaagttgtgt ccgccgccgc 120
cggggatcta gcgaacgtgg gatcgacaat cagcgccgcc aacaaggcgg cagcggctgc 180
gaccacgcag gtgctggccg cgggcgccga tnagggtgtca gcgcgcacg cggcgtgtt 240
tggtatgtac ggcctgnaat atccggcgat cagtgcgcaa gttgccgcgt atcaccanca 300
gtccgtgcag 310

```

```

<210> 566
<211> 326
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 566
aacggggacc ncaagaaacc attcaanaac gaggggtcgt caccaacgct gaaaccgacg 60
gttgccagcc ggcccacgat attgctgtgt cgagggtccg ctgtaccctc accgaacgtg 120
agtccacac cgcggaggcg ggcgactctg gcgtcgttag cagccgagct caagggtgtc 180
cgcaccactg tctcgaatgc ttttaaccga ccgatcagc tctccgccga tctacgtgaa 240
cgagtgttg ccacggccaa gcgactgggc tatgccggac cggatccggt ggcgcgatcg 300
ttgcggaccc gcaaagccgg tgcggt 326

```

```

<210> 567
<211> 374
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 567
agctttggag ccncnccgan ccnccggtac gcccgcgcac cgccgtaccc ggcacccgac 60
ccctttgagc cgttcgccgt ggccgcggtg ganctggccg acgagggact gatcgtgctg 120
ggcaaagtgg tcgatggcac gctggccgcc gatctgaagg tcggcatgga gatggagctg 180
acgaccatgc cgctgttcgc cgacnacgac ggtgtgcagc gcacgtctta cgcgtggcgg 240

```

```

atcccatcgc ggcgccggcga cnatgcanag cgcanccgatg ctgaggagcg ggcgccgatga 300
ggatgagcgc gccggaaccc gtttacntcc tgggtgccgg tatgcacccg tgggggaaat 360
ggggaatga cttc 374

```

```

<210> 568
<211> 422
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 568
ttctcncatc gttcgtactn ngatgggacg ctgctgcccg aggcgatcct ggccaaccgg 60
ctctcgccgg cgctgacctt cggcggggcg aacctgaact tctttccgat gggcgcttgg 120
gccaaacgta ccggggctat cttcattcgg cgtcagacga aagatattcc cgtctaccgc 180
ttcgtattac gtgcttacgc cgcgagctg gtgcaaaacc atgtcaacct cacctggtcg 240
atcgaagggg gtcggaccag aacgggcaag ctacggccac cgggtgttcg gatcctgcgt 300
tacatcaccc atgcggtcga cgaaatcgac ggtcccgaag tgtatttggg gccgacctcg 360
atcgtgtacg aacagctgca cgaagtggaa gccatgacca ccgaagccta tggcgccgtg 420
aa 422

```

```

<210> 569
<211> 300
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 569
ttcttcgggg taccgctgat cggcggcacc atcacgcacc cgggtgcagg cgaggcggcc 60
gccggtgtgg tgttgctacg gccggccagc cggggtaccg gtgtgatcgc cgggtggtgcg 120
gcccgcgccg tgctggaatg tgcgggggtg cacgacatct tggccaagtc gctgggcagt 180
gacaacgcga tcaatgtggt gcacgccacc gtggccgcgc tcaagctgct gcaccgtccg 240
gaggaggtgg cggcgcgccg cggtttgcca atagaagacg tccccccggc cgggatgctg 300

```

```

<210> 570
<211> 343
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 570
gtcgaaagtg accatctcta ccttgagtgc cataccgccg gaccctatgc ctcggatagc 60
tcggcggaag gaaacgcttg cagtgccgcc gaataggcgg ctacgtcgtg agcgcccatc 120
aactctcgcg cggagtgcac cgccagctgg gcgcgccga cgtcgaccgt ggggattccg 180
gtgcgcgccg cgccaacgg cccgatcgtc gaccgcacg gcagatcggc gcgatgttcg 240
taacgctgca taggcactcc cgcgcgctgg caggccagtt gcgaaacgcc cccgccgggt 300
gccttcgcgc ggttggtctt accgcaaatt tggggttgcc cct 343

```

```

<210> 571
<211> 220
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 571
aaagccacgg aaacgattgc ctactgccga atcggggaac ggtcctcgca cacctggttc 60
gtgttgccgg aattactcgg acacaaaaac gtcaagaact acgacggcag ttggacagaa 120
tacggctccc tgggtgggcgc cccgatcgag ttgggaaact gatatgtgct ctggacccaa 180

```

gcaaggactg acattgccgg ccagcgtcta cctggaaaaa

220

<210> 572

<211> 254

<212> DNA

<213> Mycobacterium tuberculosis

<400> 572

tttcgccacc	gcnaggtcgt	gcgcggttcca	gaaaagcgtg	gtttcgccgg	gcgcgaggat	60
tcgacgggtcc	aactgaccag	ccgggtcccgc	cacccgttag	gcaggatcgc	ggtgtctata	120
tggttcgccct	cggcataaac	gccattgctg	cggtgaaaat	cggacatctc	gccgattgcc	180
acgtctacat	gatccgcttt	gtcccgcgcc	gggtcgttga	caaacgcgat	gtcngcctcc	240
tggaagcgg	tggc					254

<210> 573

<211> 329

<212> DNA

<213> Mycobacterium tuberculosis

<400> 573

tcgccaaagt	gattcgtgct	caccnaccag	atccgtggtc	ggatccgcng	ctgcggcggg	60
ctgcgaccct	gcattctcgg	ggcaccgctg	accaaattgg	gcgcgcgcga	gcagacgtct	120
cggcgggacg	ccacgccgac	tgcccgatgg	tgctggccgc	gtgtccgcnc	gtcnccgacc	180
ccggccgcgt	cnaccaaacc	ggccgcgcgt	cgttctggac	ctatcccacg	tgccntcggg	240
gtccacgctc	gacgcgaccg	anaacgtaac	cagcgtcctc	gancgggttcg	cccccggtt	300
ccgtgacatc	gtggtggcgg	ccgcgcgcgt				329

<210> 574

<211> 297

<212> DNA

<213> Mycobacterium tuberculosis

<400> 574

gtaccgtcac	catgatcgcc	cccatcgcca	tcggtgagct	gatagatccc	agccggtttc	60
gccaaacccg	gagcgatctt	ggcgcgctgc	tngtngtcnc	tganaentag	ccaccaacag	120
agcccggtgt	gcgacaagan	gactgatcgg	atctctccgg	acacntcgag	ggggtcntca	180
ggagnccggg	cgccaccccg	aggtaagcct	ccgcccagcc	tcacaccgcg	accgggtatc	240
ncaagtgcg	caataanccc	accacctcct	cggacccccc	gttgatatgc	gctgggt	297

<210> 575

<211> 401

<212> DNA

<213> Mycobacterium tuberculosis

<400> 575

atactcaagc	ttagacctca	ctgatgtggc	gggacgcggg	agataaccgc	ggttcgagcc	60
gttcaacagt	ggtgggtccc	acaccagttg	tttgcccttg	cgaagtaaag	cgattcgatt	120
tgctcgaaaa	gagggtcggc	tgctcgtgag	ggacatccat	ggccgatacc	tcagcgatct	180
caacgggtcaa	gcgactgcat	gtttggcgca	aggtatcgct	aagcataggt	tcgtgacgga	240
tttgacagca	agagctttcc	aaagattgct	gtccacatan	tgattcgcat	ctctacacct	300
cttcgcgggt	gctgtcaaga	gccattcgaa	tcagttatct	cgtcgtgct	tggaanaaat	360
tttcccagcc	tgcgttggac	aaaccgcgtc	gccaaagcgg	t		401

<210> 576
<211> 453
<212> DNA
<213> Mycobacterium tuberculosis

<400> 576
agcttcccga gaaacagtgc attccctaag cagcccgttg tcacgccgat gagtgaagag 60
tgcacgcaat cgccggaatc cggcaaagcc ctgcacaagc gaaatcaacc cggaggctga 120
caaggcaacg tcggtgatcc gtaccgcctg gttggacaaa cggcagaagg cggcctcgtc 180
cggtcctatc acgccgagca cactgggtgat agcgcgcata ggcatacggg cggccacggg 240
ggagacgacg tccgcgggcg tctgggtcag taaccgcgcg accagttctc gggcaagctg 300
gtcgaccatc gggcgccacg tctccaacgc gccacgcgcc atacctggg cagttgctt 360
gcgcatacgg gtgtgcgcgg gcggatcgga cgtcgcagaa acgcagccac cccgtgagaa 420
gtgaccacg gcgctggaca cgtgtctggt tac 453

<210> 577
<211> 474
<212> DNA
<213> Mycobacterium tuberculosis

<400> 577
cggccgggat gtgcgcaatg gcaggttgct gcccggttg atgtcggcgt tagcgccgga 60
ttccaccaca tccccttgcg aaagtccgtt ggggtgcaat atgtancgt tctccccatc 120
gagatagtgg agcaacgcaa tccgtgcggg acggttcggg tcgtactcga tgtgcgcgac 180
cttggcgttg acaccatctt tgtcatggcg gcgaaagtcg atcatccggg aagcgcgctt 240
atgaccgccg cctttgtgcc nggtggtaat cgggccatgc gcgttgcgtc caccgcgacc 300
gtgcagcggg cgcaccagcg acntctccgg ggttgaccgg gtgatctcgg cgaaatcaga 360
tacgctggcg ccgcgacgac caggcgctcg gggcttgtag ttgcgaattg ccatggtcta 420
atcaggtctt tctctcacct ctcgtcgcgg ggctagggcg cattgcctgc tcct 474

<210> 578
<211> 357
<212> DNA
<213> Mycobacterium tuberculosis

<400> 578
tagcgggtgta accaactccc gggtcaccac ccgcaaacct cttgcggcaa cagcaccgtc 60
gacgcgtcaa ccggggtgcc cggaatcctg tggatgggca tcgagtgcac ggtcacgacg 120
tccccgacgc ggccggtggc aacgacaagt ggcccggatg caccacaaat gacggccgca 180
caccggtggg gacggccagc acgagagccg tgtcgccgaa gtcgacgcta atgccgtagg 240
cattggccgt cacaacaggc gacgccccgc gtaccaccga gtccacggng gttgggcggt 300
ctcctcggcc aaccaggcgt gaaccgcggc gatccgaatg cagcaagacc cgtgggc 357

<210> 579
<211> 269
<212> DNA
<213> Mycobacterium tuberculosis

<400> 579
ccattggctg gtgtgcgcat accantaana cgcgcggggc acctgacgcg gcggccgcaa 60
ccattcgggtg gccatcgcca tcgtctgcca cccgggtcaac ggacgcacct tctcctggcc 120
gacctagtgc gccacccgcg cgcggttgcg tccatcgat ccgggtcaaca tgagcagcgc 180
caacaccgag cgggtacatga catctgctgt ggaaccagtg acanattccg ccgcccata 240

tgatcntcga ccgtcctccg gattcggtc

269

<210> 580

<211> 272

<212> DNA

<213> Mycobacterium tuberculosis

<400> 580

gccggcctgg	tcaaaggggc	gtccgaagga	nccgggctgg	gtaacaagtt	cctggctcat	60
atccgcgaat	gcgacgccat	ttgtcaggtg	gtgcgggtgt	tcgtcgacga	cnacgtgact	120
catgtcaccg	gacgggtcga	tccccagtcc	gacattgagg	tcgtcgagac	cgagctgac	180
ctggcagatc	tgcaaaccct	ggagcgggcc	acgggcccgc	tggaagaang	agcncgcacc	240
aacaaggcgc	gcaagccggt	ctacgacccg	gc			272

<210> 581

<211> 373

<212> DNA

<213> Mycobacterium tuberculosis

<400> 581

gatccactga	ccacgatgac	atatcgaaat	gctcgacgat	tccgatggcg	atcaaggcca	60
cgatgccctg	gccgttgggc	ggtatctggt	ggatgggtga	cccgcggtag	gttcccgtga	120
tcgtgtcgac	ccagtccacg	cgatgggcgg	cgaggtcgtc	ggcacgcac	accccgccgt	180
ntgccgccga	gtgcgcctcg	agtttggcgg	ccagctctcc	ccggtagaac	tctcaccgtt	240
ggtcgccgcg	atcttctcta	ncgtcgccgc	gtggtcagga	aaggtaaaca	gctcaccggg	300
tttcggcgct	cgtcgcccg	gcatgaacgc	atctgcgaat	ccgggctggg	atgcgaacaa	360
cggacctgtg	ccg					373

<210> 582

<211> 314

<212> DNA

<213> Mycobacterium tuberculosis

<400> 582

tctactgccg	aatcggggaa	cggtcctcgc	ccaccnggtt	cgtgttgccg	gaattactca	60
ggacaccgaa	acgtcgagaa	ctacgagcgg	agttggacan	aataccgctc	ccnggtgggc	120
gcccccatcg	anttgggaag	cngaaatgtg	ctctggaccc	caccaagaa	tgacattgcc	180
ggccgccctc	caactggaaa	tagaaacngt	gatcaccgcg	cgcgttcttg	gaaggaatgg	240
catgccctgg	gccgggcggt	ccttcgcgtg	ccggactcct	cccaccaatt	caccgccgaa	300
ggcgtcccgt	ctgc					314

<210> 583

<211> 135

<212> DNA

<213> Mycobacterium tuberculosis

<400> 583

atactcaagc	ttctgtcacc	gaaatcccgc	atgggataac	gggttttagat	ttcgacaacg	60
ggaccgtggt	tctcaacaag	ccggatcatca	gctgggcccgc	cgacaacggt	atctacttca	120
cccgttttcg	cccgt					135

<210> 584

<211> 221
<212> DNA
<213> Mycobacterium tuberculosis

<400> 584
ctggctcaag cgctcggcgc gcaggtgaac tcggaccggc tcgacgtcgc cgaacgcgag 60
gcggtgctgg cccacgccga cgccgtcgtc gcacatatcg gcaccgtgca caagtctaca 120
acaacgccgg catcgcgtag aacggcaacg tcgacaagtc ggagttcaag gacatcgagc 180
gcatcatcga cgtcgacttc tggggcgtcc tccacgggcc c 221

<210> 585
<211> 70
<212> DNA
<213> Mycobacterium tuberculosis

<400> 585
ccgccctccg cattatgggt caagaacccat cgggtcggac ttctgggctt ccaacgctcg 60
cgccgtcccn 70

<210> 586
<211> 241
<212> DNA
<213> Mycobacterium tuberculosis

<400> 586
ccgtggcact gtcagacata tgccgcgtc ctctcatcg ctgcgctcgg catcgctgcc 60
ggcggatcatg gcgtcaccct acccaagccg aacgcgaaac gagaacgtgt tccattatta 120
gggtgtgagc accaatacca gattgctcac caggaaactca cgcagcaccg ggacggatgt 180
cggccaccac gcccatctgg ggtggttagcg gggaaatacc gctaacgcgg ctccggtgcc 240
g 241

<210> 587
<211> 492
<212> DNA
<213> Mycobacterium tuberculosis

<400> 587
tactcaagct tgtccaaata tcgaagcgtc gggtcgcgag gctcggtcgg cagctccagc 60
aaaacccgct ccacccttag atgccggtat ccctcaaggt ctttatccgc cgcttcaccc 120
cactggcaca cggtcaccgg cacgtcgccc ccggccatgg cgcgcaaccg ctgaagcgga 180
cccgcagacc gctgcggtga tggactgata gcgatccacc cggcattgag ccgggctatc 240
cgcggggaagt tcgccgggtcc cccgcccaca tacagcggag gatagggctt tgtcaccggc 300
ttcggccagc agtagatcgg atcgaagtcc acatatgtcc catggaattc cgcctgctcc 360
tgcgttcaga tctcgattat cgcgcgcaac cgctcatcga tcacacgtcc gcgcaccgca 420
gggtccacac catggttggc gactttcttc cgcaaccagc cacaccacg ccgaaacgaa 480
accgtccctg cg 492

<210> 588
<211> 313
<212> DNA
<213> Mycobacterium tuberculosis

<400> 588

caggcatgca	agcttggcca	actcctcatc	ggacttgaag	gtgccgtcct	cgttggcggc	60
cctgctccac	ggcacgttga	tggcaccagg	aatgtgtccg	ggccgctggc	tttgttcctg	120
cggcaggtgc	gcgggggcca	ggatcttgcc	ggagaactcg	tcgggagagc	gcacgtcgat	180
gaggttcttg	acgttgatgg	ccgccaggac	ctcgtcgcgg	aatgcccga	tcgtgttatc	240
cggcggggan	gcggtgtagg	aagtcaccgg	ccggctgacc	gggtcgctgg	acagcggggc	300
tccgtcgagc	tcc					313

<210> 589

<211> 305

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 589

atactcaagc	ttcaaaacag	gcctgttgtg	ggcgcacccg	gctcgccgag	ttctgcacgc	60
accgcctcaa	gtgcggcccg	caccgcccgc	atctcccggg	cacgcagggc	cgcgcccgcc	120
gccgcagcga	cggcgtgttc	gcgcagttcg	ccgtcaatga	tgctgacctg	atcgcccacc	180
cgggcgggtc	cggcgtcgtc	ccgttcaacta	atcgcggtgc	tcagcagcgt	ctcgacagcc	240
accacccgag	tggagaccag	atgcnccacc	acggaccgca	gcgatgccag	tcacctcacc	300
cgctcc						305

<210> 590

<211> 394

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 590

caggcatgca	agctttgcag	ttgctgagta	atgtcggcca	acgtcaccac	aatcgcgatg	60
aattcaatca	tgccgcccag	ggcggccaac	ccaatgggtg	ccgcgagcgg	cagctcgatc	120
gcagcgcgga	ggttgccggc	cgccagttga	ttcacgaaca	gggtgaggtc	ataggcgggc	180
aggatagtga	cgaaggcaag	acctagatct	gccgtcggaa	gaagaatcga	gtatccggtc	240
gacacaacgg	aagcgaaagt	gtccgcgatg	ttgatgagcg	tcgccgggtg	tggcggcggt	300
ggcggcggtg	gcaccgtccg	cacataccgc	gggaacgcgg	gcatccgaat	ttggggcagg	360
gtgttcaagg	cggctggcaa	ctcaccatga	atct			394

<210> 591

<211> 457

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 591

ccggctcgta	tgttgtgtgg	aattgtgacc	ggataacaat	ttcacacagg	aaacagctat	60
gaccatgatt	acgccaagct	atcttaggtg	cactatagaa	tactcaagct	tggccgcagg	120
gccgagtcga	ttggtcgcgg	tcgcctcgac	agttagctta	tgcaatgcta	acttcggggc	180
aaagttcagg	cggatcggcc	gatggcgggc	gtaggtgaag	gagacagcgg	aggcgtggag	240
cgtgatgaca	ttggcatggg	ggccgcttcc	cccgtcgcgt	ctcgggtaaa	tggcaaggta	300
gacgctgacg	tcgtcgggtc	atctgccacc	tgctgcccgt	ccctgggcat	cgcgggtttac	360
cagcgtaaac	gtccgcggga	cctggctgcc	gcccgggtctg	gtttcgccgc	gctgacccgc	420
gtcgcccatg	acagtgcgac	cctgnaccgg	gctgggcc			457

<210> 592

<211> 438

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 592
gtgtgctgtc aattcagagc tgagcctgat gcactcaact tactgagcat gctaacgctg 60
gtcgtgcggg tcttgttccc gcgtgtcggc agggcacacg ctcgggggt agctgggaga 120
ggccccggtc aagccccgag agcagtgtc agtccgccag cttgaccgac tttcgatgag 180
aacgcgttc tcgccgtatt gaactggcgt gctgacggtc gctgagcagc gctcgccgag 240
tgcgggcgt gattctttca tcgagccagg aggcgcattc gtgttcggcc gcctgcgggt 300
cggccccatc gtcgacgcga tccgtcacc actcctcgat caggtctgcc tcatcgaacg 360
ggccaacggt gctgtcggag taagtgtgcg tgggcacgcg agccgggtgc tgtggtacac 420
ccaccgttgc atgaacaa 438

<210> 593
<211> 220
<212> DNA
<213> Mycobacterium tuberculosis

<400> 593
atactcaagc ttcaccaggc gccggcgggc cgcggcgcca agccaggcag ccgcgctcgg 60
cgcgtcgggg ccttcgcgcg gctcggccga cagttcgatc tctggatcgg cggggctctc 120
cgggccccgc tcggcgacct cagcggggcg cgccttcgg ccgaaccatt ccctagccat 180
agataaccgc acctcaatgc acggtttggc ggcaaccgg 220

<210> 594
<211> 266
<212> DNA
<213> Mycobacterium tuberculosis

<400> 594
agcttcgctc acgaccgcgc ctgcgcgggt cgcggcgccat cggtcacggt atctcatgac 60
gacgtcacgt agggccgcta gccgcgagcg ggcgcgggtca actggcgagg cggcgggcgac 120
gtgactgagc tggccgagct ggaccggttc accgcggaac taccgttctc gtcgacgac 180
tttcagcagc gggcttgagc cgcgctggaa cgcggccacg gtgttgctgg tgtgcgcgcc 240
gaccggcgct ggcaagacgg tggtcg 266

<210> 595
<211> 105
<212> DNA
<213> Mycobacterium tuberculosis

<400> 595
atactcaagc ttgccgggac cgcggaacag aaccggcggt tcctaccgag gtgtgcggcc 60
ggcgcgatat cggcctccc actaacgaa cccgatgtgg gctcc 105

<210> 596
<211> 141
<212> DNA
<213> Mycobacterium tuberculosis

<400> 596
acgtttggctc tgccggaacg tatttccagc ggcacgcatt cggcgtgggt gccgggcgcc 60
gagttgcgtc gctgggatca cgcagcagtc gccggcggt gccgtcgggc tatgaattgc 120
accgagccgg aaaatcnca c 141

<210> 597
<211> 234
<212> DNA
<213> Mycobacterium tuberculosis

<400> 597
ataactcaagc ttgtcgtatt ccgtggcact gtcagacata tgcgccgctc ctctcatcg 60
ctgcgctcgg catcgtcgcc ggcggtcatg gcgtcaccct acccaagccg aacgcgaaac 120
gagaacgtgt tccattatta ggggtgtgagc accaatacca gattgctcac caggaactca 180
cgcagcaccg ggacggatgt cagccaccac ccccatctgg ggtggtagcg ggga 234

<210> 598
<211> 184
<212> DNA
<213> Mycobacterium tuberculosis

<400> 598
cgttggtagc ccgatatgca tagtgtatct tactgaacat gatttccatt atggagcccg 60
gggtgccggc agcgcgaacg gtgcgccgct agacgcgggc ggactgacc aggggtgttc 120
gggcgaacat cggcccggct tcggattccg gtccgggtac cgggcgaccc accgcttcga 180
ggta 184

<210> 599
<211> 351
<212> DNA
<213> Mycobacterium tuberculosis

<400> 599
ataactcaagc ttggccaact cctcatcgga cttgaaggtg ccgtcctcgt tggcggccct 60
gctccacggc acgttgatgg caccaggaat gtgtccgggc cgctggcttt gttcctgcgg 120
caggtgcgcg ggggccatga tcttgccgga aaactcgctc ggagagcgca cgtcgatgag 180
gttcttgacg ttgatggccg ccaggacctc gtcgcggaat gcccgaaatcg tgttatccgg 240
cggggaggcg gtgtatgagg tcaccggccg gctgaccggg tcgctggaca gcgggcgtcc 300
gtccagctcc cacttcttgc gggcgccgct caacnacttg acttctcctg g 351

<210> 600
<211> 438
<212> DNA
<213> Mycobacterium tuberculosis

<400> 600
atatcttaag cgtcgggtcc cgaggctcgg tcggcagctc cagcaaaacc cgctccaccc 60
ctagatgccg gtatccctca aggtctttag ccgccgcttc accccactgg cacacgggtca 120
ccggcacgtc gccccgggcc atggcgcgca accgctgaag cggaccgcac agccgctgcg 180
gtgatggact gatcgcgatc caccggcat tgagccgggc tatccgcggg aagttcgccg 240
gtccccgcgc cacatacagc ggaggatagg gctttgtcac cggcttcggc cagcagtaga 300
tcggatcgaa gtccacatat gtcccatgga attccgcctg ctctgcgtc cagatctcga 360
ttatcgcgcg caaccgctca tcgatcacac gtccgcgcac cgcagggtcc acaccatggt 420
tggcgacttc ttcgcgca 438

<210> 601
<211> 410

<212> DNA

<213> Mycobacterium tuberculosis

<400> 601

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gaccgaatgg gccagcgttg ccagcatcag tccggcgccg gccgacacca gtgacggcaa 240
cggtgaaatc gcgtggggcg caacgccggt gaacaacgcg cgggcatcct cggccgccag 300
cgaccgccag gcaggggtgc cctgggccag catccgcagc ccgagacgca ggaccgagcc 360
cagtgcagta ggcaaagacc gcttgtcgga gacatgaact ccacgaccgt 410
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<210> 602

<211> 456

<212> DNA

<213> Mycobacterium tuberculosis

<400> 602

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agcttattga accgcgggtc gcaggcaaag tggacctcat aacgactcgg gtccagcgac 60
cgcgccaaca cgaacggccg gacgacgtgg gccagggtcg cggcctcccc taaaaacagg 120
atccgttgcc tgcgagcgac aggtctcgggt gcggcggttg gcgccgtgct cgtcccagcy 180
tccggtcccc ggtcgccggc gacgcttggt tcctccatac tcgcccccta atctcgagcy 240
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tatttctcac accgaccgct agttgcggat cagaaatccg ttggggcgcy aagtccagcc 360
gaatttggtc tcccgcctcg catcatgctt gtaatcggtt ggaaattcat cctcatatgc 420
ctcgatcgct tcatagggtc caggccaaac cgggca 456
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<210> 603

<211> 217

<212> DNA

<213> Mycobacterium tuberculosis

<400> 603

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cttccggctc gtatgttgtg tgggaattgt agcggataac aatttcacac aggaaacagc 60
tatgaccatg attacgcaa gctatttagg tgacactata gaatactcaa gcttggccac 120
ctcgcggtgt gtggtggaac ccatctgagc agtgtgccaa accggggcag acagctccca 180
attgacgtga gcccgcctac ttgctgggta agcgtcg 217
```

<210> 604

<211> 478

<212> DNA

<213> Mycobacterium tuberculosis

<400> 604

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tagcgcccc tcccggggcg agctccacgg cgtggatcaa ggtaccggcc gggatgttgc 60
gcaatggcag gttgttgccc ggcttgatgt cggcggttagc gccggattcc accacatccc 120
cttgcgaaag tccgttgggt gcaatgatgt agcgcttctc cccatcgaga tagtggagca 180
acgcaatccg tgcggtacgg ttccgggtcg actcgatgtg cgcgaccttg gcgttgacac 240
catctttgtc attgcggcga aagtcgatca tccggtaagc gcgcttatga ccgccgcctt 300
tgtgccgggt ggtaatccgg ccatgcgcgt tgcgtccacc gcgaccgtgc agcgggcgca 360
ccagcgactt ctccggggtt gaccgggtga tctcggcgaa atcagatacg ctggcgccgc 420
gacgaccaag cgtcgtgggc ttgtttcttc gaattgcatg tctaatacagg tctttctc 478
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<210> 605
<211> 459
<212> DNA
<213> Mycobacterium tuberculosis

<400> 605
tgaaactata taataactcaa gcttgccaaa gaagacctcg tcgaccaagc aggacgcgac 60
cgctcgaggtg gcgatccggc ttggcgctga cccgcgtaag gcaaaccaga tggttcgcg 120
cacggtcaac ctgccacacg gcaactggtaa gactgcccgc gtcgcggtat tcgcggttgg 180
tgaaaaggcc gatgctgccg ttgccgcggg ggcggatgtt gtcgggagtg acgatctgat 240
cgaaaggatt cagggcggct ggctggaatt cgatgccgcg atcgcgacac cggatcagat 300
ggccaaagtc ggtcgcatcg ctcggtgctt gggtcgcgcg ggcctgatgc ccaacccgaa 360
aaccggcacc gtcaccgccg acgtcgccaa ggcgctcgcg gacatcaagg gcggcaagat 420
caacttcgcg gttgacaagc aggccaacct gcacttctc 459

<210> 606
<211> 464
<212> DNA
<213> Mycobacterium tuberculosis

<400> 606
gctgagctcc acggcgtgga tcaaggtacc ggccgggatg ttgcgcaatg gcaggttgtt 60
gcccggcttg atgtcggcgt tagcgccgga ttccaccaca tccccttgcg aaagtccgtt 120
gggtgcaatg atgtagcgt tctccccatc gagatagtgg agcaacgcaa tccgtgcggt 180
acggttcggg tcgtactcga tgtgcgcgac cttggcggtt acaccatctt tgtcattgcg 240
gcgaaagtcg atcatccggg aagcgcgctt atgaccgccg cttttgtgcc gggtggtaat 300
ccggccatgc gcgttgcgtc caccgcgacc gtgcagcggg cgcaccagcg acttctccgg 360
ggttgaccgg gtgatctcgg cgaaatcaga tacgtggcg ccgcgacgac caggcgtcgt 420
gggcttgtag ttgcgaattg ccatgtctaa tcaggtcttt ctct 464

<210> 607
<211> 205
<212> DNA
<213> Mycobacterium tuberculosis

<400> 607
atactcaagc ttgttggtga cctcgccggc gaacagttct cgcacgattt ccggattagc 60
gggactggtc accagttggg tatgcgggaa ggcgctgacg ttcgccgcga ttagctgttt 120
gatggacgcg gcggtgatgt cctgatcacg gaactggctg taatagcca gggtcgccac 180
gcttccatcc gggcccggac ccggc 205

<210> 608
<211> 244
<212> DNA
<213> Mycobacterium tuberculosis

<400> 608
gatgatcgcc ggtgccaccc cgatccgtgc ctcggtcagc gcgaacgtgc tttccgggtc 60
ggcgaccacc atgtcgcacg caccgaccag gccgaaccgc ccggcccgcg catgccggtt 120
gatggcgccg accaccggca gcggcgactc gacgatggcg cgcaacagcg ccgtcatttc 180
ccgcgcccgc gccaccgcca tccggtacgg atcaccacca cctccgcccg cctcgctgag 240
gtcc 244

<210> 609
<211> 289
<212> DNA
<213> Mycobacterium tuberculosis

<400> 609
atactcaagc ttgccgcaat cgaaaccaac ctgtttgtgc cgcaagaaat tacgccgtgg 60
cccggcgccc atcaagaaac gccccggcgc gcggcggtgt cgtcgtatgg catgacgggc 120
accaatgtgc acgccattgt cgagcaggca ccggtgccag cccccgaatc cgggtgcacca 180
ggcgacaccc cggccacacc cggtatcgac ggcgcgctgc tgttcgcgct gtcggccagc 240
tcgcaggacg cgctgcggca aaccgcgcgc cggctggccg attgggtct 289

<210> 610
<211> 282
<212> DNA
<213> Mycobacterium tuberculosis

<400> 610
ttggcggggtt ggccacanca ncccgccggt gacggcgacg atgctgggct ggttgccggc 60
ctgcgccacc gcggtcttga tgctgggttg ctgtcttggg acgatcccga aatagtccac 120
gcggatctgg tgattttgcg ggctaccgcg gattaccccg cgcggtctga cgagtttttg 180
gcctggacta cccgcgtggc caatctgctg aactcgcggc cgggtgggtggc ctggaatgtc 240
cancgcggtt cacctacgtg accttgatgg gatccggggg nt 282

<210> 611
<211> 312
<212> DNA
<213> Mycobacterium tuberculosis

<400> 611
ncgtggacac cgggtgtcgan cgccaccagc cgcattgtctg cangtcnatt ccgtcctcgg 60
caacatcttg aatgccgagc agcgccctgg cgtgatcggc aaccggggat gaccgctcgc 120
cgatccgctc gacaatcccg gcggcacgtg acatgccggc ggacgggtcg acgagctgga 180
acttcagcga cgacgatccg gaattgatca ccagcacggg gctactcatg gaccctcgcg 240
cctgaatccc gtgatggcca cgggtgttgac tattcgtcga cagtgcaccc gagatagtct 300
tcacggctgc gt 312

<210> 612
<211> 349
<212> DNA
<213> Mycobacterium tuberculosis

<400> 612
catgtattgc cgtgctcacg gcgccacgct cgatgggtttc tcgaagtctc cgggctgggtg 60
tacagcttct cgttgatctc gttcgccacg ccgtcctctt cccgccgacg acccgatctc 120
gatctccana atgatcttgg cggccgcgcg cgccttgagc agtcctggg cgtatggccag 180
gttctcatcg atgggcactg ccgaccgtcc cacatgtgcg acggaacaaa gatgtcacct 240
tgctcacgcy tgcgcnagat cncanaaggg ccggacatac tgtcnacttg tccttgggca 300
gtgggtccgtg tcagcccacg tgacgggtac ttggcgcgat aacgtgggtg 349

<210> 613
<211> 350
<212> DNA

<213> Mycobacterium tuberculosis

<400> 613

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gccaccacga cccggccgta actctgctca cggaaatgcg gccaggccgc gcgtagcacg 60
tggtatccgc cataaagggtg caccttaagc acggcgctccc aattctcgaa cgacatcttg 120
tggaagggtgc cgtcgcgcaa gatcccggcg ttgctcacca caccgtgcac ggcgccgaat 180
tcgtcaagcg cggctcttgat gatgttcgct gcgcgcgtcct cggtggcgac gctgtcctta 240
gttggecgacc gcccgggcccc ccttgtcgcg aatctcggcg acgacctcat cggccatcgc 300
cgaacggcgc ccgtgcccgt cgcgggcgcc accgaggtcg ttgaccacga 350
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<210> 614

<211> 126

<212> DNA

<213> Mycobacterium tuberculosis

<400> 614

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caggcatgca acctttgtcc acacggcgtc tactccgtgc aagggtccgac cgcttccacg 60
tcccgccgtg acggtgctcc atctccctca gcaacgcgtg aagtgggtccg atcccgcggc 120
ttcagg 126
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<210> 615

<211> 395

<212> DNA

<213> Mycobacterium tuberculosis

<400> 615

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gatcacgtcg cgctcgcatc gagcatggcc cgcgacgcta cacgatcgcc gtcgtcgatg 120
acacgaccga gccgtacgcc ggccgtaagc cgcgccagga ttccggcga aaacgtctacg 180
tggcggggtgt actgggtgtc gaatgattcg tgggggtgct atgcgtcctg caatcgtcga 240
catagatccg tcgccgcata gcgtcgacaa ctccgggtga gtggaataca cttgccgatc 300
acgcgacgtg cgcggatcga tgccgaccga aatacgacca catggctctt gttgcnacgt 360
gttggcggca tcaaataccc tcagtgcctg ccgac 395
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<210> 616

<211> 371

<212> DNA

<213> Mycobacterium tuberculosis

<400> 616

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ttncgcctt nacgcctact ccnagacgat gctcgacgcg tgtgagcaca cggcgctgct 60
gtagacggca cggcgagcgt ggatcgcgct tgggtgaccc aagcctctac gcgcgtcgct 120
gcgtcgatcat cgggtaccga acatattccg gtcgttgccg agagtgtgca tgtgcggctc 180
ttgtgaacga acatagcaaa gcgtatatgt ctgtggcggc tctgcagata tcgcgataat 240
acgtatatac ataagggtggc gcgcgatcta tcggtatata cgttatggcg gacgtgcgtg 300
agcgtgagtc gcggcgcatc gcgcacttcg cgatcgcggtg actggtcctc gcgactgcgc 360
gcatgcgtag c 371
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<210> 617

<211> 423

<212> DNA

<213> Mycobacterium tuberculosis

<400> 617
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 tggagtgccg cgcagccttg cccgangtcg cgatcgcgtc gcgggcttcg gggagcagac 120
 tgacctgcag atggaagtcg tgccacatgc ccgcgaacgg cgagctcgat gcttgttttc 180
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 tgcatgacga tgggcgcagg cccgctcatg tcccgtagac ggggagatac gggcagccgc 300
 ggatcgagac ctacgtagcg cggcgcccat cgtgccatcg acgaagaatg acggatcgcg 360
 cagcgccgtc gcgtcgcttc gatgtcacgc gagatcgcca cggcagatca gcgatgcgcg 420
 ggc 423

<210> 618
 <211> 354
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 618
 cggtagcccg gcaacaaacg ccttgtgacg agcgcgtccg agcggtcacg ggccctccacc 60
 gtcatgcaca gctccttctc caggtctacg ccgacgtcgc ggtccacatt ggtgagcttg 120
 gcgaatgcct cggcaacctc gtcgaaatgc gcctccgcgt ccgcatcgaa ggtcgccatg 180
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 gagtccggcc gaacaatggc catttcccg cactctagaa tccagtcacg gtctcggtga 300
 cgacgccttg ccgatcacat agctcgaccg gatcggagag aatctggttc tcgt 354

<210> 619
 <211> 128
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 619
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 ctcaacgaac gattcctgaa cgaagggtcg tccaccaacc tccaaaccga acggttgcca 120
 gccccggc 128

<210> 620
 <211> 295
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 620
 gcaagtccgc tcaatgtggt tgtgatcaca ngactacgtc gcctcaatca gctcaaacgt 60
 caccocgtgg cgtgctgcgc agcatgaagg tgggcgcccg cacgatgtgg gcgaagcaac 120
 aggtaataac tggtcggcat gggtaacccc tcattggggc gttgcggatc ggggtgcacgc 180
 ccggagtgcc ggtcgaaactc aacaccgcct tcaccgatct tttcgtcgaa aatggcggtc 240
 gtgtcggggg atacgtccgc gatccacga ggcggaatcc gctgagccgc actga 295

<210> 621
 <211> 361
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 621
 atactcaagc ttcgcgccct caagcggctg aagggtggtc cggcgtncca acngtcgggc 60
 aactcgccga tgggcatggt gtcgacncc gtcccgggtga tcccgcgga gctgcgcccg 120

```

atggtgcagc tgcacggcgg cgggttcgcc ncgtccgact tgaacgacct gtaccgcagg 180
gtgatcaacc gcnacnnnnn gntgaaaagg ctgatcgatc tgggtgcgcc ggaaatcatc 240
gtcaacaacn agaancggat gctgcnggaa tccgtggacg cgctgttcga caatggccgc 300
cgcgggccggc ccgtcaccgg gccgggcaac cgtccgctca agtcgctttc cgatctgctc 360
a 361

```

```

<210> 622
<211> 361
<212> DNA
<213> Mycobacterium tuberculosis

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```

<400> 622
tgcgcatggc agttgttgcc ggcttgagtc gcgttagcgc ggattccacc acatcccttg 60
cgaagtcgtg ggtgcaatga tgtagcgctt ctcccatcga gatagtggag caacgcaatc 120
cgtgcgtacg ttgggtcgta ctcgagtgcg cancttgccg ttgacaccat ctttgtcatt 180
gcggcgaagt cgatcatccg gtaagcgcgc ttatcgacgc cgctctgtg ccgggtggta 240
atccggccat gcgcttgctt ccaccgcgac gtgcagcggg cgcacaccga cttctccggg 300
tgacgggtga tctcggcgaa tcagaacctg gcgcgcgaca cagcgtcgtg gctgtacttg 360
c 361

```

```

<210> 623
<211> 312
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 623
tgggtgatca gatactggct agttggctcg gtggggatgat cgaagatcgc ggtggccggc 60
agcgttactg cgggtgacgt gtttaagcgg taccgtactcc acggcactca angaattana 120
tcccgaatcg gcaaaccctg gccagcgtcg agtcgcgcgc gccgtcgcgc cccccaccgc 180
tgcgcatgc tcacatacca cctcgatcgc tgccggagtt gctcgtcggc cgaccgaccg 240
gccagccggg cggcaaaccg gaggacccaa gattcagcac caccatcgct agcccgatct 300
ggccgcgcgt gg 312

```

```

<210> 624
<211> 454
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 624
tcgtagcggc tgcgaccant ccgcggacag ctccgccacg cgacgggtcg ggatcaccgc 60
ggtcaaacca ccgagcggcg aggatctctg gccgtcgacg tgaccgcgca cggccgcggc 120
gatggccagt cccgaccgcc gttccacttg gcgtacgcgc tggatgtgtt gtgcgcgaac 180
ggaatcccaac ctcaattatg acctcgttgt gggcgagcgc ggtatcgta gcccgaccag 240
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tgcacacngt cgacatgtct cggcgggatcc gcctgcagaa cgaacgccaan gtgcgctgtg 360
cgacacgggt cgcgatcacc gctcgcacgc ggagatcggc acacgcgcag cgcacgatc 420
ataatctctc gatgcggtct ccaccaccga acag 454

```

```

<210> 625
<211> 366
<212> DNA
<213> Mycobacterium tuberculosis

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<400> 625
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 gacgtcgtca gcgcgtatcc tggcncggtc gttgaactgt gcgcagggcc ctaccgcaa 180
 cccgtgcggg gtctgcgaat cctgcgtttc gttggcgccc aacgcccccg gcagcatcga 240
 cgtggtagag ctggatgccg ccagccacgg cggcgtggac gacaccgcg agctgcggga 300
 ccgcgcgttc tatgcgcggg tccactcacg gtaccgggta tttatcgtcg acgaggcgca 360
 catggt 366

<210> 626
 <211> 363
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 626
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 ggtctcgttc ggcaataact cgttcggcgt gcaggacgcg gcgcaaact acttcggcat 120
 caacgcgtcc gacctgaatt ggcagcaagc ggcgctgtg gccggcatgg tgcaatcgac 180
 cagcacgtc aacccgtaca ccaacccga cggcgcgctg gcccggcgga acgtggtcct 240
 cgacaccatg atcgagaacc ttcccgggga ggcggaggcg ttgcgtgccg ccaaggccga 300
 tccgtgggg gtactgccgc agcccaatga gttgccgcgc ggctgcatcg cggccggcga 360
 ccg 363

<210> 627
 <211> 367
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 627
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 ctgcggcggc ggagctgccg tgaccgtcta tttgggtgat cagatactgg gctagtccg 120
 tcgggggtgg gtgatcgaag atcgcggtgg ccggcagcgt tactgcggtg acggctgtta 180
 agcggttacg tacctccacg gcactcaagg aattaaatcc cgaatcggca aacgcctggc 240
 cagcgtcgaa tccggcagcg ccgtcgcgcc ccagcaccgc tcgggcatgc tcacatacca 300
 cctccatcgc tcgggcgaat tgctcgtcgg ccgaccgacc ggccagccgg gcggcaaacc 360
 cggaaga 367

<210> 628
 <211> 518
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 628
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 ggatcgactc gggaccacca actccgtcgt ctccggttctg gaangtggcg accnggtcgt 120
 cgtcgccaac tccggagggc tccaggacca cccgtcaatt gtccggttcg cccgcaacgg 180
 tgaggtgctg gtcngccagc ccgccaagaa caggcagtga ccaacgtcga tcgcaccgtg 240
 cgctcgggtca agcgacctg ggcagcgact ggtccataga gattgacgca agaaatacac 300
 gcccgagat ctgcgcccat tctgatgaac tgaacgcgac ccgaggctac tcggtganga 360
 catnacgacg cgttatcaca ccccgctcno ttcaatgacc ccacgtcngg caccaaggac 420
 ccggcaatcg cggctcactt gngcgatngt cnacaaccaa cgcgncgcct ggctacgggc 480
 tcaacaaggc anaagacaca atccgctctc gattgggtg 518

<210> 629
<211> 435
<212> DNA
<213> Mycobacterium tuberculosis

<400> 629
atactcaagc ttatcgaggc ggcgcatacc gaagcgtggg aaatccagac cgaataccgc 60
gacgtgctgg acactttggc cggcgagctg ctggaaaagg agaccctgca ccgacccgag 120
ctggaaagca tcttcgctga cgtcgaaaag cggccgcggc tcaccatgtt cgacaacttc 180
ggtggccgga tcccgtcgga caaacgcccc atcaagacac ccggcgagct cgcgatcgaa 240
cgcggcgaac cttggcccca gccgggtccc gagccggcgt tcaaggcggc gattgcgcat 300
gctaccaag ccgctgaggc cgcccggtcc gacccgcca aaccgggcac ggcgccaacg 360
gttcgccccg cggcaccacc ggtccggtga ccgcagtag gtccccccag cctgactacc 420
gtgccccggc gggct 435

<210> 630
<211> 398
<212> DNA
<213> Mycobacterium tuberculosis

<400> 630
tggccgggct ggtagccccg gtatggcaag gttccgctca atgtggttgt gatgcagcag 60
gactacgttc gcctcaatca gctcaaactg ccccccggtg gcgtgctgcg cagcatgaag 120
gtcggcgccc gcacgatgtg ggcaaggca acaggtaga acctggctcg catgggtcga 180
gccctcattg ggccgttgcg gatcggttg cagcgcgccg gagtgccggt cgaactcaac 240
accgccttca ccgatctttt cgtcgaaaat ggctgctgtt ccgggggtata cgtccgcgat 300
tcccacgagg cggaatccgc tgagccgcag ctgatccggg ctgcgcgcgg cgtgatcctg 360
gcctgtggtg gtttcgagca taacgagcag atgcgaat 398

<210> 631
<211> 464
<212> DNA
<213> Mycobacterium tuberculosis

<400> 631
gtccagtcaa gcacgggtcc tctccgacta cgccaagant ggcgacgtgt cagtgcanaac 60
agcgganatg gtggcgcccta tgcgtcgacg ctcaaaacn gcggtgancg cgttctgggtc 120
gtgcaccatc gagccgtgcc agcccggccg cgtgccgtca gccgcatcca ctggatgcct 180
tctcgnggtt tcaatcangt acangcgacg ttcgccacca tcgtgccggg gcacggttag 240
cgagaaaccg ccgacttcac cgattgcctc ggtgatgccg tcgaacagat cgggcctatt 300
gtcgacagcc agtgtgatnc gtatttgccg ccgtgctcct cgtcgcaacg atgcgaacac 360
agatccgtgg nggacgatag cggctgacaa ngtgggggca acacaatcac atgccacatt 420
tcttcatttc acgcccacaa cccagacttc gtctcgatgn gccg 464

<210> 632
<211> 499
<212> DNA
<213> Mycobacterium tuberculosis

<400> 632
cacgcggtct ggcccgatcc gaagatccct ttgccggcgt ggccggtctg ctccggcggtg 60
ttgtacactt ctgcaacacc tcggcaccga caccaccacc gtngcttgaa caccgccaac 120
atcggcagca gatcttgatg gtccgtgtga atcccacggt gactttggag tgggaaggcgc 180
catactgac gccgcgccag cacatgagct agcggcagga aaaccagcag ccgctcacct 240

tgcgagcag	cgctnggtga	tatgcctggc	gcccttaatc	tcgtgaacca	gttggtattgg	300
gtcaactggc	agccttggtg	ctccggtggt	gccgangtgt	anataagctc	ccgggtccgt	360
caacgtantg	cgagggcggc	ggttactcgg	cggttcaacg	agccccgctc	gtgagcnatc	420
agcctttgga	ccgaacggga	ttcatactcc	gcaggcgggc	ctccgaaatc	ggcacatgtc	480
ctttgatcgt	tcgcaacan					499

<210> 633

<211> 343

<212> DNA

<213> Mycobacterium tuberculosis

<400> 633

ggccatgtca	catcggtggt	acaggtaaac	cgcgccgtgt	gcgcggtctc	ggagatcaga	60
acgtggtcgc	agttgaaccg	cgggctttca	gccagtcgcg	ataatcggcg	gaagtcggcg	120
cctgccgccc	caactagcgc	gactcgccac	ctagcacacc	gatggcgaag	gccatgtntc	180
cggccacgcc	gccgcggtgc	atcaccaagt	catcgactag	gaagctaagc	gacancttgt	240
gcagggtgttc	gggcagtagc	tgctcggaac	atcggtcgga	aaccgcatca	aatggtcggt	300
ccaatcgaac	cggttaccgc	atcgtcacaa	aaatctccgt	cct		343

<210> 634

<211> 192

<212> DNA

<213> Mycobacterium tuberculosis

<400> 634

gggtctacaa	ccaccgggtc	tgacttctgg	gcttccaccg	ctcgcgccgt	cgcgacaaac	60
agcgcggtcg	aaccgacact	cgttgtgatg	tcccagctat	cacctccggt	aggcacccaa	120
tcgaccctac	ccgggtatct	cacccccgat	ctccaggctc	cgccgatcca	tgcgcatccc	180
ggtccggatc	cc					192

<210> 635

<211> 376

<212> DNA

<213> Mycobacterium tuberculosis

<400> 635

caggcatgca	agcttgctgt	attccgtggc	actgtcagac	atatgcgccg	ctcctcctca	60
tcgctgcgct	cggcacgtgc	gccggcggtc	atggcgtcac	cctacccaag	ccgaacgcga	120
aacgagaacg	tggtccatta	ttagggtgtg	agcaccaata	ccagattgct	caccaggaac	180
tcacgcagca	ccgggacgga	tgtagccac	cacgcccata	tggggtggta	gcggggaaat	240
acggctaacg	cggtccggt	gccggcagcc	cagcgacagc	cctcgggcgc	ggacacggct	300
aacaacgacg	acccatagtt	gttctttgcc	ggatggccgt	gtttgctgac	atatcgggcg	360
cgcgccgggc	gccgcc					376

<210> 636

<211> 83

<212> DNA

<213> Mycobacterium tuberculosis

<400> 636

nctacgtgc	tgaatgttgt	gcgcgggagg	anctcaagac	ccacgcggtt	gtacggggac	60
ntgcgacatg	ttcaaccgcc	gga				83

<210> 637
<211> 319
<212> DNA
<213> Mycobacterium tuberculosis

<400> 637
ctaaccaaca agccatggtg gttggcgccg tcgagaggtc ggcggtcgcc acaacgggaa 60
gatcgcttg agcgtcgctc gaccgcccgc tcgagttggg tcataacgaa gtactgatgc 120
cgatcatgtc gacgtgtccg tcgcatcagc gtgcagcggc gacccctcga cgagcctcgg 180
tgccgcccgc gccagggcac cagctgtttt agcgcattgt gtcgcccg taataaagga 240
ngtcggtcgc ctccgctgct gtggttgccg aataacatct tcccttcctg caacaggatg 300
agaatggtt taattgctc 319

<210> 638
<211> 94
<212> DNA
<213> Mycobacterium tuberculosis

<400> 638
ctaagctttc ggggtccgcg ccactagtag cgcggttgccg gccccgccga cctagaatgt 60
tccgccatt gccgtttcct cccgccgcg ggtt 94

<210> 639
<211> 122
<212> DNA
<213> Mycobacterium tuberculosis

<400> 639
tctggtgccg ggtgtgccga cgggtccgtc cgccctctgct tcagtgattc tgtgatgcga 60
ccggcaacgt cctcgttgtt cgggtgtctat gtggtccgtc tctccttgtt ccgcatacga 120
tt 122

<210> 640
<211> 210
<212> DNA
<213> Mycobacterium tuberculosis

<400> 640
gcgatcgntn accacaaggc cgcaaccgtt cgcgcgtcga ctgaacgtgc tgccgcctgg 60
agaactggcg ctgctgccac ctggtcggcg catcggcact tcgaggactg gatttcgacg 120
cgtggcccga cctgangtng gcggtggacn ngtgtgcacc cggttgattc ctccggccttg 180
ccgggatgcc acctgcgcct ggtggtcgat 210

<210> 641
<211> 328
<212> DNA
<213> Mycobacterium tuberculosis

<400> 641
cgtgaccgga cgggggtgccg cgccaaccgg tcttggccaa ttgccgggga ctggggctgg 60
agtataaagc gggcctgttg ccggaagata aagtcaaagc ggtgaccgag ctgaatcaac 120
atgcgccgct ggcgatggtc ggtgacggta ttaacgaccg ccagcgatga aagctgccgc 180

catcgggatt	gcaatgggta	gcggcacaga	ctggcgctgg	aaaccgccga	cgcacattaa	240
ccataaccac	ctgcgcggt	ggtgcaaagt	attgaactgg	cacgnccact	cacgccaata	300
tccgccagaa	catcactatt	gcgctggg				328

<210> 642
 <211> 553
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 642						
atactcaagc	ttcttaccba	nagcatgaac	cccgcctgcc	aatgccgcca	ccgtgggtgct	60
gtcggccggc	cgggtgcggg	cacaatcgcc	gagttcggcg	aacagatcct	cgaaggtcct	120
cacggccagc	gattgttgca	cgtgtcagcc	agccaagtca	cggtgggttg	acgccacacg	180
ttcgccaccg	ccgcgccgcg	cattagggca	tcctaataata	ggttaggcta	ccctanttat	240
tcctgtggtc	naaggaggca	gccgaacgtg	accttcccga	tgtgggtcgc	agttccgccg	300
gaagtgccgt	cagcatggct	gtccaccggc	atgggccccg	gtccgctgct	ggccgcggcc	360
agggcgtggc	acgcgctggc	cgcgcaatac	accgaaattg	caacggaact	cgcaagcgtg	420
ctcgtgcggg	tgcaggcaac	tcgtggcagg	ggcccagcgc	cgacggttcg	tntcccccat	480
caaccgttcc	gtattggcta	accacctgca	cggtggcacc	gcacaacgcc	gccacaaacg	540
cgccccgcta	tac					553

<210> 643
 <211> 486
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 643						
ggccgaactt	aatcggttgt	tggcggctgc	cgagttgggt	cactcggggg	gtgtgcactg	60
gcacatgggt	ggccggattc	aacgcaacaa	agccgggtcg	ctggctcgct	gggcgcacac	120
cgctcactcg	gtggacagct	cgcggttggt	gaccgcgctg	gatcggggcg	ttgttgcggc	180
gctggccgaa	caccgtcgtg	gcgagcggct	gcgggtttac	gtccaggtca	gcctcgacgg	240
tgacggatcc	cggggcggcg	tcgacagcac	gacgcccggc	gccgtagacc	ggatttgcg	300
gcaggtgcag	gagtcagagg	gcctcgaaact	ggtcgggttg	atgggcattc	cgccgctgga	360
ttgggacccg	acgaagcctt	tgaccggctg	caatcggagc	acaaccgggt	gcgtgcgatg	420
ttccgcacg	cgatcgggtc	gtcgcgggca	tgtccaacaa	cttgaaatcc	cgtcaacatg	480
gtcgac						486

<210> 644
 <211> 146
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 644						
gcttccccctg	atactcgacc	agccccactc	gggccaatac	gtgaatgtcc	tagcattttt	60
caccggttca	cgggctagtc	gagtagtaga	cgattgatta	gcctgaacgt	acctccgacg	120
gccagctgac	gaacgggttt	gacgga				146

<210> 645
 <211> 204
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 645


```

tcagctgtct gtagaagggc tggcgatact gtgcactgtc tgatatcgcn ncgtngtggg 60
actatncagn ccatnangat gcggttcngn nnntgcagag natcctggna cacatncggt 120
tcacgttaat cancatcgcg anttinctncg tnttcgatta nttctgctaa cgnntctnnn 180
agtgcctgcg ggtcgactct agag                                     204

```

```

<210> 646
<211> 209
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 646
nctctgccgg gcnagagcgc agagtcggac ggcttcgtcg atcgtgaagc gaccntgcga 60
tgancagata tcgntnacac tgctcanaaa cttcggatca tcgntgatac acaggccaac 120
gggtagcggg tgtccaaccg cttcgtcaac ganatgggat cgtgacganc ctacgctcgc 180
aggatatgtc gcngaccngn tctaganan                                     209

```

```

<210> 647
<211> 183
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 647
cacttcatgc tcgtgcggtt gcntcgattt gcncgagngg ttagctcctc gagtngtga 60
cgtatcactc cggcngacta nccgtatcng cgtcccgcac cggcactg gtctagccac 120
accggggaga atncncgacc ggngctatcg accnatcacg gcttgctcgnn aagatagnca 180
gcc                                     183

```

```

<210> 648
<211> 154
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 648
atactcaagc ttgccaaccg ccaccctgca tccggggggc gagcactgct ccgccgacca 60
gtacgaacca acctgcggtg cccaggccat tgacaatgtg ctggtcggcg cccgcgagtt 120
ctagcacagc aacgccgcgg ccaccacagg ggcg                                     154

```

```

<210> 649
<211> 219
<212> DNA
<213> Mycobacterium tuberculosis

```

```

<400> 649
cggtcggtgt gcttggcggc gtcggtatca acaccgccca cgaaatgggg cacaagaagg 60
attcgctgga gcggtggctg tccaagatca ccctcgccca gacctgctac gggcatttct 120
acatcgagca caaccgtggc catcacgtcc ggggtgtccac accggaagac ccggcgctcg 180
cgcggttcgg caaaactttg tgggatttcc cgcccccc                                     219

```

```

<210> 650
<211> 307
<212> DNA
<213> Mycobacterium tuberculosis

```

<400> 650
aataactcaag cttcgcggag gtggtggggc aggagcacgt caccgcgccg ctgtcgggtg 60
cgctggatgc cggccggatc aaccacgcgt acctgttctc tgggccgcgt ggctgcggaa 120
agacgtcgtc agcgcgtatc ctggcgcggt cgttgaactg tgcgcagggc cctaccgcca 180
acccgtgcgg ggtctgcgaa tcttgcgttt cgttggcgcc caacgcccc ggagcatcg 240
acgtggtaga gctggatgcc gccagccacg gcggcggtga gcaaccccg gagctgcggg 300
accgcc 307

<210> 651
<211> 252
<212> DNA
<213> Mycobacterium tuberculosis

<400> 651
gatggcactc acgctggaca agaccttcac aaaatctgaa atcctgacct gatacttgaa 60
cctggtctcg ttcggcaata actcgttcgg cgtgcaggac gcggcgcaaa cgtacttcgg 120
catcaacgcg tccgacctga aattggcagc aaaccggcg tctggggcg ggcatggtgc 180
aatccgaaca agcacgtca acccgtaac caaccccgaa gggccgctgg cccggcgga 240
cctgtctc ca 252

<210> 652
<211> 402
<212> DNA
<213> Mycobacterium tuberculosis

<400> 652
aacagctatg accatgatta cgccaagcta tttaggtgac actatagaat actcaagctt 60
ctgggcgtcg tgggtgcccg cctgccggtg caggaactgg attttactgc catctctcgc 120
gaccctgagg tgggtccaggc ttacaacacc gaccactcg tgcaccacgg acgggttcgc 180
gccgggattg gccgcgcgct gctgcangtg ggcgagacca tgcgcggcg ancaccggca 240
ttgaccgcgc cgctgctagt gctgcacggc accgatgacc ggctgatccc catcgaaggc 300
agccgtcgcc tggtnaatg tntnggaten gccgacgtgc anctgaanga ntatccccg 360
ctgtgccacn aggtgttcaa cgaaccggan cgcaaccaag tg 402

<210> 653
<211> 429
<212> DNA
<213> Mycobacterium tuberculosis

<400> 653
caaggcatac gccaaagacc aagggatcgc agtcacctcc gtcaacggcc tggtcgcccg 60
ccacgggtcc gtgcaggaga cgtggctggc catgcaaagc gccgccgcct tatcaggaac 120
gccccggctt gtcggctttt cctgcatcga cacatttcgc gaggtgttgt ggttggcgca 180
ncgcgcgaga caggcctggg atggcgtgcy catcgtcatc gggaatgcga tggcaacact 240
gaactacgag cgcactcctgc gccagcatga ctgtttcgac tacgtcgtcg ttggcgacgg 300
ggangtagcg ttcaccaagc tggccttggc cctggcgaaat gacctgcggg tgacgactcc 360
cgggactaac ccgccgtant gagcaaggac agattctgcg cacaccctcc tcgctggctg 420
accttgaca 429

<210> 654
<211> 353
<212> DNA

<213> Mycobacterium tuberculosis

<400> 654

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aacagctatg accatgatta cgccaagcta tttaggtgac actatagaat actcaagctt 60
gccggtgatc tgggtggcca actcggcggg caccatctcc atcacgacng caaacgctcc 120
ggcttcggcg acagcgatcg cgtctgcgat ngtttggtcg gcggcgtctc cgcggccctg 180
cacccggaag ccgcccgaag tgttgacnct ttgcgggggtg aagccgatgt gtgccatcac 240
cgggatnccc gccgcggtca gacangcgat ttgctcggcc acccgctcac cgccctcgan 300
cttgacngca tgtgcgccgc cgtccttgaa gaaaccggtg gcgngggcaa ccc 353
```

<210> 655

<211> 464

<212> DNA

<213> Mycobacterium tuberculosis

<400> 655

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cgttgagatc cagctgcgca ctgtgcagcg cctcgggtgt ctgctcggcc tgccgggata 60
actcgttgag cttggccagc gcgtcgtcgg ccggatcagc cagcacattc gcggccagga 120
cgccggagga gacggtgaag ctcgcaaaga aacctatggc ggaccgatg attacacgcg 180
cgatcaacca cctctgggtcg agcctcaaaa ttgtcttct taaacgggcc atcgacggat 240
gacgtcgcgc tggtttaggt ctcaaacagg ttacgaaacg atctcggaat tgtccaaaag 300
gggaagttaa gaaaatgat agatttctac catttcgctg tggacgatcg tacttctgct 360
atagggctcc aggggcatcg acacgcaacg accttacgcg acaccggatc cgcgctggcg 420
gcggaacggc accangcgca accgaagggc caatccgaca tcgg 464
```

<210> 656

<211> 515

<212> DNA

<213> Mycobacterium tuberculosis

<400> 656

```
atactcaagc ttatctaggc gccagcttga ttggtctggt tgcattggcc agctgcgcga 60
gcctggctca cttcaactac aacaaccgca aacaattgcc gccttcggat ccgagttcgg 120
ttgggtacgc ggcaatggan caccatttct cgggtgaatca gactattcct gagtacttga 180
tcatccactc tgcacacgac ctgcgaaccc cgcgcggcct tgccgacctg gagcagctgg 240
cgcaacgtgt gagccanatc ccaggcggtg ccatggttcg cgggtgtgacc cggccaaacg 300
gggaaacctt tgaacaggcc cgggcgacat accaagccgg ccaagtggc aaccggctgg 360
gcggcgcgtc gcgaatgatc gatgagcgca ccggcgacct gaatcggctg gcatcgggtg 420
ccaacctgtt ggccgacaat ctcggtgact tcgcggtcaa gtcagccggg ccgttgcggg 480
tgtccgcagc cttgtccagc ccctcgctta ctcca 515
```

<210> 657

<211> 403

<212> DNA

<213> Mycobacterium tuberculosis

<400> 657

```
caggcatgca agctttttga gcgtcgcgcg gggcagcttc gccggcaatt ctactagcga 60
gaagtctggc ccgatacgga tctgaccgaa gtcgctgcgg tgcagccac cctcattggc 120
gatggcgccg acgatggcgc ctggaccgat cttgtgccgc ttgccgacgg cgacgcggta 180
ggtggtcaag tccggtctac gcttgggcct ttgcggacgg tcccagcgt ggtcgcggtt 240
gcgcgcgcaa agcggcgggt cgggtgccat cagggaatgcc tcaccgcgc ggcactgcac 300
ggccagtgcc cgcggcgatt cagccatcgg gacatcatgc tcgcttcata ctctcgacc 360
agtcggcgga acagctcgat tcccgaacg cccacgcgat gtg 403
```

<210> 658
<211> 444
<212> DNA
<213> Mycobacterium tuberculosis

<400> 658
aacagctatg accatgatta cgccaagcta tttaggtgac actatagaat actcaagctt 60
gtagaaaaag atcgggtgagc gcatcgattc gctccgccgg gtttgccgct gcggcgccgg 120
agctgccgtg accgtctatt tgggtgatca gatactgggc tagttcggtc ggggtggggt 180
gatcgaagat cgcgggtggcc ggcagcgtaa ctgcggtgac agctgttaag cggttacgta 240
tctccacggc actcaaggaa ttaaatcccg aatcggcaaa cgcctggcca gcgtcnagtc 300
cggcagcgcc gtcncgcccc agcaccgctg cggcatgctc acataccacc tcgatcgctg 360
cggcganttg ctctcngcc gaccgaccgg ccancggggc ggcaaaccn gaagacccaa 420
gaattcatca ccaccatcgc tagc 444

<210> 659
<211> 437
<212> DNA
<213> Mycobacterium tuberculosis

<400> 659
ccttcttgac acccacctcg ccatcgacct tgagcactcc gtcgtagttg gtgaacatgt 60
gaccggcgat cgggcgggtg aacgcgtact ggggtgctgg gtcgacgttc atcttcacca 120
cgccgtagcg cagcgccctc tcgatctccg acttaagcga acccgagccg ccgtggaaca 180
cgaaatcnaa cggcttgggc tngccggca gtccgagctt ggccgccgcc acctgttgcc 240
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tgccgaacgt cncggccagc angtatttgc cgtgctcacc ggcgcccanc gcctcgatgg 360
ttttctcgaa gtctccggg ctggtgtaca gcttctcggt gatctcggtc gccacgccgt 420
cctcttcgcc gccgacg 437

<210> 660
<211> 422
<212> DNA
<213> Mycobacterium tuberculosis

<400> 660
aacagctatg accatgatta cgccaagcta tttaggtgac actatagaat actcaagctt 60
ggaaaggaga tccccgggaa cctggtggca accccgccat tggggttggt gggattgccg 120
atcagcgtga angaaagctc gtctggagac agcgggtcgg ccgaagccgc aagattggcc 180
atcactagtg acganatcgt ggcgctctgc gagtancna agacagtgc gttgttnccg 240
gcggcaattt gctgccgaat cgcactttcg agaatacng caccctgcgc caccgangaa 300
tcnaaagtga ggttcttgat caccgaccac gggtnagacc cttggggcgt gaagancgcc 360
tgcgcnataa caccggggac gctgccactc atgtncagcg cgttcgcgan ctcnacatat 420
ct 422

<210> 661
<211> 412
<212> DNA
<213> Mycobacterium tuberculosis

<400> 661
tcctggtgat cganggccgc ggttccggcc gaaaatccgg ttcgggttcg ggtcgcgggt 60

ccaacttgan	cgcggtccgc	agctgattca	ccgtggcaac	gccggccaac	tgcgcataat	120
gcgcatccga	accctcacc	gcccgcgccg	cgatcacc	aacctgatcc	aacgacaacc	180
gcccctccc	cataccgcg	gcgcagcgcg	gaaactccg	caaccgccg	gccaccgtgg	240
cgatcgtgtg	ggcgttgcct	gacgaacanc	ccatcttcca	ggccaccaac	cccgccaccg	300
accgcgcccc	cgtcacacc	cacaaccctg	cgcgatccag	ctcagccacg	atctccacaa	360
tgcgccccatc	aatcgcatg	cgctgaacgg	gcaactccgc	caactcctcc	aa	412

<210> 662

<211> 467

<212> DNA

<213> Mycobacterium tuberculosis

<400> 662

aacagctatg	accatgatta	cgccaagcta	tttaggtgac	actatagaat	actcaagatc	60
tggtacccat	ccgtgataca	ttgaggctgt	tccctggggg	tcgttacctt	ccacgagcaa	120
aacacgtagc	cccttcagag	ccagatcctg	agcaagatga	acagaaactg	aggttttgta	180
aacgccacct	ttatgggcag	caaccccgat	caccgggtgga	aatacgtctt	cagcacgtcg	240
caatcgcgta	ccaaacacat	cacgcataatg	attaatttgt	tcaattgtat	aaccaacacg	300
ttgctcaacc	cgctctcgaa	tttccatatac	cgggtgcggg	agtcgccctg	ctttctcggc	360
atctctgata	gcctgagaag	aaaccccaac	taaatccgct	gcttcaccta	ttctccagcg	420
ccgggttatt	ttctctcgctt	ccgggtctgtc	atcattaaac	tgtgcaa		467

<210> 663

<211> 452

<212> DNA

<213> Mycobacterium tuberculosis

<400> 663

aacagctatg	accatgatta	cgccaagcta	tttaggtgac	actatagaat	actcaagctt	60
ancgccacct	cccgggcgga	actccacggc	gtggatnaag	gtaccggccg	ggatgttgcg	120
caatggcagg	ttgttgccc	gcttgangtc	cgcgttagcg	ccggattcca	ccacatcccc	180
ttgcgaaant	ccgttgggtn	cnatgatgtn	ncgcttctcc	ccntcnanat	aatggancaa	240
cgcnatccgt	gcggtacggg	tcgggtcnta	ctccatgtnc	gcgaccttgg	cgttganacc	300
atctttgtca	ttgcggcgaa	agtcnatcat	ccggtnagcn	cgcntatgan	cgccgccttt	360
gtgccgggtg	gtaatccggc	catgcgcntt	gcgtccaccg	cgaacgtgca	acgggggnc	420
caacganttc	tcnngggttg	aaccggtnat	ct			452

<210> 664

<211> 93

<212> DNA

<213> Mycobacterium tuberculosis

<400> 664

tgtgtgtggt	ggtaacccat	ctgagcagtg	tgccaaaccg	gggcagccag	ctcccaattg	60
acgtgagccc	gctcacttgc	tggtgaagcg	tcg			93

<210> 665

<211> 352

<212> DNA

<213> Mycobacterium tuberculosis

<400> 665

aacagctatg	accatgatta	cgccaagcta	tttaggtgac	actatanaat	actcaagctt	60
------------	------------	------------	------------	------------	------------	----

gcgggtnatn	gccttgggtca	acggcacctg	gatcggatcn	gggtctaccg	cacacatnga	120
ctggagcttc	ggcgaantca	tcgcctatgc	ctcgcggggg	gtgacgctga	ncccnnggtga	180
cntgttcngc	tcnngcacgg	tgcccacctg	cacgctcntc	naacacctca	ngccaccgga	240
atcattcccn	ggctgggtgc	acganagcga	nnttgctncc	ctccaagtct	aaaggctggg	300
cgananaagc	anaacgtccc	gacnaacggc	actccttttc	cntttgctct	tc	352

<210> 666

<211> 448

<212> DNA

<213> Mycobacterium tuberculosis

<400> 666

gaaatcattg	atggtttgag	tcaccaggcc	gatcaagcct	tcgccgagcc	aaattccaat	60
caagaggccc	aagcccgtac	caatcagccc	ggcaacgagg	gattccgtca	ttatcagcca	120
aaataactgc	tctcgggtta	cacccaaaca	gcgcaatatg	gcgaaaaacg	gtcgccgttg	180
cacgacatta	aatgtcacgg	tattgtagat	taaaaagata	cccaccaaca	angcaatcaa	240
actgagagcg	gttaaattga	ccgtaaaagc	gtccgtcatc	tgtttgacng	tgtcccgttg	300
ggtatccgac	gtttccatac	gcacaccggc	cggcagtcct	tgttggatgc	gtnttgcaat	360
ggcctcatct	ttgatgatca	aatcgatgtn	gctcagtcct	ccgggcatat	ggaacaactc	420
ttggggccgtg	gaaatatcag	caatgata				448

<210> 667

<211> 386

<212> DNA

<213> Mycobacterium tuberculosis

<400> 667

ctttcgccca	ggccggcgcg	gatgtcctca	tcgcttcacg	aacatcatcc	gagcttgacg	60
ctgtcgccga	acagatccgc	gctgcccggc	gccgcgccca	caccgttgcc	gccgatctgg	120
cccatcccga	ggtgaccgcg	cagctggctg	gtcaggccgt	cggagctttc	gggaagctcg	180
acatcgctcg	caacaacggt	ggcggcacca	tgcccaacac	gctgctaagc	acctcgacca	240
angacctcgc	ggacgccttc	gccttcaacg	tgggcaccgc	ccacgcgctg	accgtcgcg	300
cggtgccgtt	gatgctggaa	cactccggcg	gcggcagcgt	gatcaacatc	agctccacca	360
tgggcgggct	ggcggcgcg	ggtttc				386

<210> 668

<211> 378

<212> DNA

<213> Mycobacterium tuberculosis

<400> 668

tgtgggctcc	gatccggcgc	gcatggcatc	gacggcgacg	ccgatcgatg	acggccaggc	60
ttacgagctt	gaggggtgtga	agttgtggac	caccaacggt	gtggtagcgg	acctgctagt	120
ggttatggcg	cgggtaccgc	gcagtgaagg	gcnccgagg	ggaatcancg	cctttgtcgt	180
cgaggctgat	tcgcccggga	tcaccgtgga	gcggcgcaac	aagttcatgg	gactgctgtg	240
catcgaaaac	ggcgtgaccc	ggcttcntcg	cgtcagggtg	cccaaagaca	acttgatcgc	300
anggaagcga	cggctctgaag	atcgcgctga	ccacactcaa	cgccggacgg	ctgtccctac	360
cggcgatcca	accggagt					378

<210> 669

<211> 344

<212> DNA

<213> Mycobacterium tuberculosis

<400> 669
gagctggccg agctggaccg gttcaccgcg gaactaccgt tctcgctcga cgactttcag 60
cagcgggctt gcagcgcgct ggaacgcggc cacgggtgtc tgggtgtgcg gccgaccggc 120
gctggcaaga cagtggtcg cgagttcgcc gtgcacctgg cgctggcggc cggcagtaaa 180
tgtttctaca ccacgcccgt gaaagccctg agcaacaaa agcacaccga tctcacagca 240
cgctacggcc gtgaccagat ctggctgctg accggtgacc tgtcngtcaa cggcaaccgc 300
cggtggtggt gatgaccacc gaaatgctgc gcaacatgct ctac 344

<210> 670
<211> 411
<212> DNA
<213> Mycobacterium tuberculosis

<400> 670
gatctctgga tcggcggggc tctccgggcc ggccctcggcg acctcagcgg gccgcgcctt 60
ccggccgaac cattccctag ccatagatga ccgcacctcg atgcacgggt tggcggcaac 120
gcggcaaggc tcngtcggg cccagccgcg gcaatgcggg taccgggag cgcggtcng 180
tanaccancg ctggactgcg tcgcgcgggtg cgtcnacntc aaagtccccg gcgtcccata 240
tcgcgtatga cgcgggcgcg cccggcacca ngggtgccga tccggccgct tcgaacacca 300
ccggcccgcg agccgcgcg ggtccggcag cnaaccgcg cgcgccgata cccgctgccc 360
gcgtgcgtga ttgaccgcg cgcgcacgct ggccanggat caaagcccgt g 411

<210> 671
<211> 473
<212> DNA
<213> Mycobacterium tuberculosis

<400> 671
ggacgcgtag cccgccaggc cggtcagggt gcccttccag tccacgcgcg tgtggtcggc 60
gaaccgctta tcttcaatcg agacgatcgc cagcttcatc gtgttggcga tcttgtccga 120
gggcacctcg aaccggcgct gcgagtnacg ccacgcgatc gtgttgccct tcgcgtcgac 180
catcgtcgat accgcaggca cttgcccctc gagcagctgg gccgagccgt tggcaacgac 240
ctcagangca cgattggaca tcagccctag cccgcctgcg aacgggaacg tcagcgcagt 300
ggcgacgaca ctggccaaca gacagcaccg agccagcttc agaacggtga tcgcggccgg 360
gaagcgctcg ggcatgcgtn ctacagtagc gacctcctgt cactccacgt gccgctcgg 420
ccaatagaat ctttccgcgg gcgggtgaat ctctgcngga tcggggcngg cgc 473

<210> 672
<211> 357
<212> DNA
<213> Mycobacterium tuberculosis

<400> 672
gctcgttgcc ggcggcgacg tcgtcgagct cgtcttccat cgccgcgggtg aagtcgtagt 60
cgacgagccg accgaaatgc tgctcgagca gaccggttac cgcgaacgcc acccatgacg 120
gcaccagtgc actgcccttc ttgtgcacgt ngccgcgacg ctggatggtc ttgatgatcg 180
acgantaggt cgacggggcg ccgatgccca gtcctcgag cgctttgacc agcgacgcct 240
cngtgtnncg ggccggcggg ttgggtggcat ggccgtctgg ggtcaactcg acnatgtcca 300
accgttgacc cggggtcaga tggggcagtc gccgctcggc atcgtcagcc tcgccgc 357

<210> 673
<211> 402

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 673

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gtcttttcgat ggctgcttct tcggcgctga cgctggcgat ctatcacccc cagcagttcg 60
tctacgcggg agcgatgtcg ggcctgttgg acccctccca ggcgatgggt cccaccctga 120
tcggcctggc gatgggtgac gctggcggct acaaggcctc cgacatgtgg ggcccgaagg 180
aggacccggc gtggcagcgc aacgaccgcg tgttgaacgt cnggaanctg atcgccaacn 240
acaccncgt ctgggtgtac tgcggcaacn gcaagccgtc ggatctgggt ggcaacaacc 300
tgccggccaa gttcctcgag ggcttcgtgc ggaccatcaa catcaagttc caagacgcct 360
acaacgcng tgccggccac aaccgcgtgt tcgacttccc gg 402
```

<210> 674

<211> 336

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 674

```
gccaggtcga ggtcccatgc gcgtgggcca ttgatgctga tcgccaggac gtcaaanatt 60
tggtccggcg tcagctgggc gaaaaacgtg ggccccagga cttgcccgga gctgcccggg 120
ttcccgctcg gcagctcggc ggccccggctc agaaanaaat tgcgccaggt cgcacactcc 180
gcgccgtang ccagctgctc caggggtgtcg gcatagagcc cgcggggccgc agcgtgctcg 240
ctgtcggcga acaccgcatg gtcgagaagc gttgccgccc aacggaaatc acctgcgtcn 300
aangcttcgc gggccaactc cagcactcgg tcgatg 336
```

<210> 675

<211> 405

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 675

```
naaacgttcc ggcttnggtg ccgggcgctt atttgcgtct ctgggatcac nctcagtcgc 60
cggcggtcgc cgttgggcta tnanttgcac cganccggaa aatccgcacn anaactgcna 120
gtagcggcct gcagaantgc atcctcggcg aanngacta ccggtggaca ncnacaagcg 180
ccgccgaaca acgactggc ccgagggatn ggctctatc ggccccgccc gtcgaactng 240
gaacagacng tgcggttcta ccgtgatctg gtgggaatgc tcnaccanac cttcccnann 300
gctacggaac nacggcgcgga tattngccn tccanctcg agcctgacnc tngatatcgt 360
cgannctcac catcncgatc ngctgtgccg gtnttgctcg gactn 405
```

<210> 676

<211> 389

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 676

```
cgaacgacga acnccncaag ccatggtggt tggcgccgtc aaaagggtccg cggtcgccac 60
tactggaaaa tcgccttgag cgtenctcga ccnccgcctc gagttgggtc ntaacgaaat 120
acctgatgcc gatcangtcn acgtctccgt cgcnncaacg tgcagcggcg acccactcta 180
cnangtctcg gtnccgcnc ggccagngca ccaccagtga cnaatccntg cgcctcggg 240
ccnagcantc ccggtgcnac cgnggtgggt ccggcgatgg tngggtgtnc tcnntacng 300
aacgccagcg cnatcancat cggcanactc ncgtcgatgt gccgcggcgc aaccatcccc 360
cacaatgatc nggtgcttct gatcaggen 389
```


<210> 677
<211> 135
<212> DNA
<213> Mycobacterium tuberculosis

<400> 677
ttaggcgtga cggccaccgg ggccactccg cacaatctgt acccgaccaa gatctacacc 60
atcgaatacg acggcgctgc cgactttccg cgggtaccgc tcaactttgt gtcgaccctc 120
aacgccattg ccggc 135

<210> 678
<211> 140
<212> DNA
<213> Mycobacterium tuberculosis

<400> 678
cgtcaccccc atgcgcccag atcggggctt cgagataaaa gcacgaactg gcggggcaaaa 60
cgtcgatctc ggagccggaa gggcaatcag ccgaccgtcg acgaacgaca ccggcgagac 120
cacttaggca gtgacggcct 140

<210> 679
<211> 272
<212> DNA
<213> Mycobacterium tuberculosis

<400> 679
cttttcncca tgtctcatga tnccnangga gaacnntgcn ancncngccg ctgacntngc 60
ncaccgctnt ggcnngngtg acattgggtg tggttgcggg ctgcnacgcc cgactcgang 120
ccganccatn tnttgcggcc gaccgcntnt cgtctcnacc gcanncccna tctcngccgc 180
ncccggtgga nctacngctn cttcgccatc tctcgccnat ggctccngcg nntcgcncaa 240
cgtntgggtt ggtnanctgc ctacctggtc nt 272

<210> 680
<211> 507
<212> DNA
<213> Mycobacterium tuberculosis

<400> 680
gctgcgccag tcggttcggtg cggtcatgcc gttggaccna ccatcgagat tagttgccga 60
accgcggacc accgcaagca cccggtcctg gtcgcgcacc gcgtcggcca accgcttgag 120
caccaccacg ccgcagccct cgccgcgcac gaatccatcc gcgttggcgt cnaanctgtn 180
gcatcggtcg gtcggtgaca gcgcgcacca cttggacagc gcgatggcgg tgaacggtna 240
ntaggtgacc tgcncncng cccgccaatg cccacctccg cttcacncat gcgaatggtc 300
tgacacgccn agtgaattgc caccagcgac aacaaaaatc ggtatctncn gcgacggcgg 360
acacgcnatc ccnactgata ctcgatccgc cccaccgctt gnancctcgg gttccngtgc 420
tcatgtaccn tcatgtcggg ctgcgcncga tattgacgat cgtgtttccc acgannanag 480
ancctcatca cgccggttcg agtgccg 507

<210> 681
<211> 470
<212> DNA
<213> Mycobacterium tuberculosis

<400> 681

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ctgtgtgcgg nccggcgcgat atcgggccttt ttactaaccg aacccgatgt gggctccgat 60
ccggcgcgcga tggcatctac ngcgacgccg atcgatgacg gccaggctta cgagcttgag 120
ggtgtgaant tgtggaccnc caacggtgtg gtagcggacc tgctantggt tatggcgcgg 180
gtaccgcgcga gtgaanggca ccgaggggga atcanccgct ttgtcgtcta ngctgattct 240
cccgggatca ccntggagcg cncncnant tcatgggact gcgtggcatc caanacggcg 300
tgaccggcct catccntcng ggtgcccaaa gacaacttga tcngcnngga agcgacgtct 360
gaanatcgcg ctgatcnac tcaacgccg acgctgtcct accggcgatc gcaccggant 420
tgccaanccg cgctnannat ncgcgnga at gnccgctccac nantgcatgg 470
```

<210> 682

<211> 346

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 682

```
tgggggtgccg ggcgccgagt tgcgtccctg ggatcacgca gagtcgccgg cggetgccgt 60
tgggctatga attgcaccga gccggaaaat ccgcancaaa actgcgagta gcggcctgca 120
gaagtgcanc ctccggcga aa cggagtagcg tggacaacga aaagcgccgc cgaacnacgc 180
actggcccgga gggattggcg tcaatcggcc ccgcccgtcg aacttggag anacantgcg 240
gttctaccgt gatctgggtg gaatgctcca acnnaccttc nccgaaagct acggaagcna 300
cggcgcgatn ttcggccttc ccagctcgac ctgacgctgg aaatcg 346
```

<210> 683

<211> 453

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 683

```
nggcngggaa gttaatgccc tactggttcn atgctcnac ntcncngtg acnnccctgc 60
ccgaccgcgc gaggtcctgn ccgtnaccac cgancnggcg atccgggact ctngtacgca 120
tccaacanng ancaacgtgc acgggcggag tngtnccgcc acttcgncna tgacggggtc 180
gatccnttcg acgtccgtcg ccgcgtcggt cgagtggcgg tcacnctccn ngtagctgac 240
cncacngacg agaggactcg ancccatcta cgtgtggacg aaacanatct tctgtccnac 300
gactacacca ccaccaggc catcgccgnc gcccgcgang ccccttcgac gccntactgg 360
tccngngng gcgctctccg gttgtctnnc ncntgncgtg ttcccttcacn cactgccna 420
catcganccc gagcnatncn angtcctga atc 453
```

<210> 684

<211> 382

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 684

```
ggacactgtt cgcgtgcccc tcgtcaaagc cggagtggtc gtgctgcgcc ggacccgacc 60
cgaccttcag cgggggttca cagctccgtg ggtgccgtta cttccgatcg ccgcagtgtg 120
cgcgtgacct tggctgatgc tgaacctcac cgcgttgact tggatccggg tcgggatctg 180
gctggtggcc ggaaccgcga tttatgtcng ctacgggcgc cggcactcgg cgcattggcct 240
tcggcaagcn cnananaacg cgaccggag gtggtgaact agcttcgccg cgtatttaca 300
aattgcntta tatgtctaca cataagacgc aaactgctct attgtcaant cccancgtgg 360
tgtggcncat gaagatgttt gg 382
```

<210> 685

<211> 408
<212> DNA
<213> Mycobacterium tuberculosis

<400> 685
tcctttctcgg tatcggtttg ggctgtcacc ancagttggt agttcttcac gtntctgttgt 60
tcgagcgctn agccgtcgcg cgtgtcnang tcnccggacg cgtatcccgc caggccggtc 120
anggtgccct tccantccac gccgctgtgg tcggcgaaacg ctnatcttca atcgagacca 180
tcgccagctt catcntgttg gcgatcttgt cnnacggcac ctcaaacgg cgctnctagt 240
acnccacnnc atcntgttnc cttncgctn acatctctga tncnctgc actttccctc 300
gancncttg gccgagccgt tggcantnac ctengagccc cattggacat cancccancc 360
cgctgcgaa cggaacgctc agcnctctgg cgacaacctg gccaacan 408

<210> 686
<211> 372
<212> DNA
<213> Mycobacterium tuberculosis

<400> 686
cacnccgtga tcgcnagccc cngtagaaat ngttgagcca gttggtgcgg cgctcggtgc 60
cggcggtnat ctgcgtcgagc tcntcttcca tcgccgcggg gaagtcgtac tcgacnagcc 120
gaccnaaatg ctgctcnagc agaccgggta ccnnnaacnc cncctcntga cngcaccagt 180
gcntctgccct tcttgtgcac gtaccgcgna tcctggatgg tcttgatgat cnactantnt 240
gtcgacgggc ggccgatgcc catctcctcn agcgctttga ccagcgacnc ctcggtgtat 300
cgggcccggcg ggttngtggc atggccgtct ggggtcanct cnacnatntt canccgttga 360
cccgggtca ca 372

<210> 687
<211> 403
<212> DNA
<213> Mycobacterium tuberculosis

<400> 687
tggccttctt gncangggcn nacatnngct atngcgagcg tgtaaccgat catcntcng 60
gcgactgtgg cctganccgc aagggtngcc tnattcntcc tcctgnggca tggttncac 120
acggaatgnc ggtaagtctg gtccgcaacc tggcccgtg cgggttgggt tcggattcgc 180
tcggctanta aggtgctcgc ctggtgtnac nactaatcnc natatacnc tancgggagt 240
ngncgtccc atcctngccc tgccgnggc gatcncgttc gcancaccgc caccggaact 300
cncaangtgc gctcatcggt ctctacgcgc catcttcccc ggattcttcg cggcngngtn 360
ccgngggacc ccgactgtg acnggcccaa cggctcatca tcg 403

<210> 688
<211> 356
<212> DNA
<213> Mycobacterium tuberculosis

<400> 688
ccggatagcg gtgtctgaac ttgcgccgtt ccctccancg cattgagctt cagcccagacc 60
ggcaggttng gagtcggcat gcggtccttc gccccgacct cgctggctaa atanccacct 120
ccgagcgcg tcacggtctt tgcaccggga cgacgcatac cggcagcgcg aacatcnccg 180
cgggctgcag cntgaacgtc caataccant cnaacagtgt ccgcgcgtna aaaccgcanc 240
cggcggtcgc ttngtaate aacggtcct gcgcaaccag ctgcaagtgc ccggtgccac 300
cggcggttgac gatcttgatg totgoganct cgcgcaccag ctcgacggcc cgggca 356

<210> 689
<211> 439
<212> DNA
<213> Mycobacterium tuberculosis

<400> 689
cctcccgacc acatacaggc aaagtaatgg cattaccgcg agccattact cctacgcgcg 60
caattaacga atccaccatc ggggcagctg gtgtcgataa cgaagtatct tcaaccggtt 120
gagtattgag cgtatgtttt ggaataacag gcgcacgctt cattatctaa tctcccagcg 180
tggtttaatc agacgatcga aaatttcatt gcagacaggt tcccaaatag aaagagcatt 240
tctccaggca ccagttgaag agcgttgatc aatggcctgt tcaaaaacag ttctcatccg 300
gatctgacct ttaccaactt catccgtttc acgtacaaca ttttttagaa ccatgcttcc 360
ccaggcatcc cgaatttgct cctccatcca cggggactga gagccattac tattgctgta 420
tttggtgaagc aaaatacgt 439

<210> 690
<211> 442
<212> DNA
<213> Mycobacterium tuberculosis

<400> 690
cttcacntcc gtacggctcg ggtacgcttc ggtcncattg tgcgagtgat agatgacgac 60
cgggacctcg tcggcatctt ccatagcccg ccacaccttc agttgctcac cggaatccaa 120
ccggtanaag gtcggcganc gctcngcatt ggtcatcggtg atatgccgct cgggacggtc 180
anagccctcg ggtccggcca gcaactccga ggcttcgctg ggggtggctcg gacgcgcatg 240
ggccaccatc gcattcacca ggtctgcgcg aatcaccagc acgtanacgg ttcttttctt 300
aagcaacacc gaantttcag gaccggaatg ctccgggaaa catgtcacgg taggtcggtg 360
ttccggctac cggctganca ttgagcacgc cggccagcac cgcacgaacc aggcaatcag 420
ccgccgccgc acccgaccgc gg 442

<210> 691
<211> 365
<212> DNA
<213> Mycobacterium tuberculosis

<400> 691
caggcatgca agcttgatgc cgccgaaacc gagcgtgagc acgccgccag ccaccacgcg 60
cgggtcgggc gccggggccc ggccgccagg ctgctccgct cggtgatggc acgccaccgc 120
gacaccaccc ggctgcgcta cgtcgagcca taccggggcg agctacatcg gctcggccgc 180
ccagtgttcg ggccctcttt cgaggtcgag gtcgataccg atttgcgcat ccgcagccgc 240
accctggacg acagaaccgt gccctacgaa ttgcttgctg ggccggggcca aagaacagct 300
tggcatcctg gcgcgattgg ccggcgccgc gctggctgcc aaggaagacc cgttccggtg 360
ctgat 365

<210> 692
<211> 307
<212> DNA
<213> Mycobacterium bovis

<400> 692
aagntcgggt ttccacacgc gcggtttgac cctagtcata tgtaatcatg tgtaccatgt 60
gcggggcgctt ttccagggcc gcgaaccacc gganatttcc tgtgatttca ctgcatgcgt 120
accatctggc acaattgagc anttgtctnt cgcgggtggc ggncggggtg cgtgccgcct 180

gctgcganat	gcaccantaa	gcccgaaccc	accggcttgg	tgaccaccgc	acgctgcgtg	240
tggggggtaa	ccactccgcg	acccaagga	tggtcatttc	caatgaaccg	gctggacttc	300
gtccana						307

<210> 693
 <211> 414
 <212> DNA
 <213> *Mycobacterium bovis*

<400> 693						
gtcgcggttc	gatcgacccg	atcttcacct	cgtaacctcg	atgcttagca	ggatccagct	60
tgaccgcgtt	tggctctacc	cactctttga	gtggcgccgt	cgcctgtgcc	ccatcggtgt	120
tcatgacgaa	cgcttcgaaa	gacttcctct	tgtgagccgg	aatgtctgcg	taaagaagtt	180
ccatgtccgg	gaagtagacc	cggtcgccct	ccacgtggta	ctccttcgag	gtccgcttct	240
cgccggatcc	gataaacacc	ggccccaggc	accgcagcgt	gagttcgaac	ggcttcaggt	300
aggtgttcat	gcggcggaact	ccgggagtcg	gagaaatagc	ggtcgcgcgt	agctgtagac	360
cggatggttt	ccgcccaggc	tgacgtcgaa	gatgcctcct	tggaaggggc	gcga	414

<210> 694
 <211> 256
 <212> DNA
 <213> *Mycobacterium bovis*

<400> 694						
aactcaagtt	tttacggtga	tcgcgcatca	cctggttcat	gaactggaag	cagcgcagcg	60
cttccttttc	ggccgcaaca	tgagccagcc	tctcgtcggc	ggtcgggtgc	aggtgctcgg	120
gcagctcggc	cgcgacagcc	gcctgaccct	gaaaccagct	tccatatccc	gcgacnaacg	180
acgccagtcc	gctacgtaac	ccctccgcga	ctgtccatgg	acaacagcgc	gttctccacc	240
gaccgggccc	gggtgt					256

<210> 695
 <211> 328
 <212> DNA
 <213> *Mycobacterium bovis*

<400> 695						
gtgcaggttt	cgacaatgtg	gtgccggttc	ggcggctacg	tgccatcgag	acactggcgc	60
angctatcgc	acccgttatc	ggctgcgagc	aaatcgcggt	atgcgttctt	gagcatgagt	120
cggcgaccgt	cgtcatggtc	gacaccacg	acggaaagac	gcagatcgcc	gtcaagcatg	180
tgtgccgcgg	attatcagga	ctgacctcct	ggctgaccgg	catgtttggt	cgcgatgcct	240
ggcgcccggc	cggcgtggtc	gtggtcggct	cggatagcga	ggtcagcgaa	ttctcgtggc	300
agctcgaaag	ggtcctgccg	gtgccgggt				328

<210> 696
 <211> 278
 <212> DNA
 <213> *Mycobacterium bovis*

<400> 696						
ttcagatcat	gcgccgcct	cgaccacgaa	natgcacgtc	gnggttcgat	cgacccgatc	60
ttcacctcgt	aacctcgatg	cttagcagga	tccagcttga	ccgcgtttgg	ctctaccac	120
tctttgagtg	gcgccgtcgc	ctgtgcccc	tccgtgttca	tgacgaacgc	ttcgaaagac	180
ttcctcttgt	gagccggaat	gtctgcgtaa	agaagttcca	tgtccgggaa	gtagaccg	240

tcgccctcca cgtggtactc cttcgaggtc cgcttctc

278

<210> 697

<211> 264

<212> DNA

<213> *Mycobacterium bovis*

<400> 697

```
gtcatgtgta ccatttgagg ggcgttttgc acggccgcga aacaccggag atttcctgtg 60
atttcactgc atgcgtaccg tctggcacia ttgagcagtt gtctgtcgcg gtggtcggcc 120
gggttgcggt cgcctgctg cgagatgcac caataagccc gaaccaccg gcttggtgac 180
caccgcacgc tgcgtgtggg gggtaaccac gccgcgaccc caaggatggt catttccaat 240
gaaccggctg gacttctca acaa 264
```

<210> 698

<211> 169

<212> DNA

<213> *Mycobacterium bovis*

<400> 698

```
aacagcgcgg ttgaactgat aggtgcggcc cggctcgagc aggccggggc atttgttcga 60
tgcggttacc gaaagatctc ttcggtgacc tgcccgcgcg cggccagctc ggcccagtgc 120
ccggcggttg ccgccgcggc gacgatcttg gcgtccacgg tggtcgggg 169
```

<210> 699

<211> 256

<212> DNA

<213> *Mycobacterium bovis*

<400> 699

```
gcatctgggc tggcggtggt tcgccgctcc gaagccgtcg aacaccatcg ccagcgcggc 60
ttccacatca acgaccattt cggccagctt ggcgcgcac agcggcttgt cgatgagcgc 120
cccaccgaat gcccgcgcgt gcccggcgta ncacagcgat tcgaccagcg cgcggcgcgc 180
gttgccgagg gcgaacgaag cggtgcccaa ccgcaatctg ttggtcagct ccatcatgcg 240
ggtgagtccc ttgccg 256
```

<210> 700

<211> 292

<212> DNA

<213> *Mycobacterium bovis*

<400> 700

```
atcggtttcc agcaacagcc gatcgacggc ttcgcccang gccgctcccg ggcgaccgca 60
ccattgctgt cgcgcggtaa cgccatcacg gatgacgcgc agttcgtcgc tgtctagctc 120
caccatcgcc tgcacaccgg cggccagnac ccattggccg tcgcactcgt anagcaggta 180
atcctcgtcg acggactcgg taaccaccgc cgccagctcc gctgccaggt cggcgggggt 240
gacaccggcg ggcacgggga tggacgacga cgcgggtgctg acggcgctg tc 292
```

<210> 701

<211> 315

<212> DNA

<213> *Mycobacterium bovis*

<400> 701
agcggtttcc cangcgggat gtgctgtgag cgccgcacca ccagcgccga cgctaaggat 60
ggaacgcacg gcatcttctg acgcgtaacc gcgttgtgat cgcgagctga ggagacggta 120
tggtgggaggg ttctcggagg ccatctggga tgttgatgtc tgtcgatctt gagccgggtgc 180
aactcgtcgg cccggacggg acgccgacgg ccgaacgccg ctaccaccgt gaccttctctg 240
aggaaacgct gcgttggctc tacgagatga tgggtggtcac ccgcgagctg gataccgaat 300
tcgtcaatct gcacg 315

<210> 702
<211> 328
<212> DNA
<213> Mycobacterium bovis

<400> 702
caagcttcca caggtaggga tgcaggaaca gcgcgttgaa ctgatagggtg cggcccgggt 60
cgagcaggcc ggccatttgt tcgatgcggt taccgaaaat ctcttcggtg acctgcccgc 120
cgccggccag ctccggcccag tgcccggcgt tggccgccgc ggcaacgatc ttggcggtcca 180
cgggtggtcgg ggtcatgccc gcgagcagga tggcgagcgc gccggtcagc cgggtgaact 240
tcgtcgaaag cttgaccctg ccgtcgggga ggcgaaccac ggtcgggtgc tanctccacc 300
aagcccgggc aacctcgggg gtggcgcc 328

<210> 703
<211> 352
<212> DNA
<213> Mycobacterium bovis

<400> 703
tggacctcat gacaacgcgg cggcgattac ccccgtacc gccagcagca tgacggcggt 60
agcgaacacc gccggatgca gcgcaggtgc gtcgatgtgc tcacggaatc gccccggcac 120
cgcgatctcg aggatcacca gtgccacccc ctgcagcgcg acaccgacga ttccgtacac 180
cgccacgccg atcaggccct gggccagctg gcgtatatgg cggcgatggt gacgatggcc 240
agcgccacat acattgtggc ggccagaacc acggcgttgg ggccggcggtc gatgaacact 300
aggcgacgca gatcgcccgg ggtcaacagg ttgaccatca gaaagcctgc ga 352

<210> 704
<211> 315
<212> DNA
<213> Mycobacterium bovis

<400> 704
tttggtgcgg ccggcaatca acttcngctc ncagcggttt cccaggcggg atgtgctgtg 60
agcgccgcac caccagcgcc gacgctaagg atggaacgca cggcatcttc tgacgcgtaa 120
ccgcgttgtg atcgcgagct gaggagacgg tatgggggag ggttctcgga ggccatctgg 180
gatgttgatg tctgtcgatc ttgagccggt gcaactcgtc ggcccggacg gtacgccgac 240
ggccgaacgc cgctaccacc gtgaccttcc tgaggaaacg ctgcgttggc tctacgatat 300
gatggtggtc acccg 315

<210> 705
<211> 390
<212> DNA
<213> Mycobacterium bovis

<400> 705
cgcccagggc cgctcccggg cgacccgacc attgctgtcg ccgcgtaacg ccatcacgga 60
tgacgcgcag ttcgtcgtg tctagctcca ccatcgctg cacaccggcg gccaggaccc 120
attggccgtc gcactcgtag agcaggtaat cctcgtcgac ggactcggta accaccgccg 180
ccagctccgc tgccaggtcg gcgggggtga caccggcggg catcgggatg gacgacgacg 240
cgggtgctgac ggcgcctgtc gcgacgctga gctcggacac agctagtaaa tgtagcctaa 300
cctacttaat gggtcgcagc cccccgggt cgtcgcattgt ccaacgttgc tcgactggaa 360
gaaaatgctc gtcggggagc aaatggcacc 390

<210> 706
<211> 322
<212> DNA
<213> Mycobacterium bovis

<400> 706
aataactcaat cttgatcggg ttccagcaac agccgatcga cggcttcgcc cagggccgct 60
cccgggcgac ccgaccattg ctgtcgccgc gtaacgccat cacggatgac gcgcagttcg 120
tcgctgtcta gctccaccat cgctgcaca ccggcgccca ggaccattg gccgtcgcac 180
tcgtagagca ggtaatcttc gtcgacggac tcggtaacca ccgccgccag ctccgtgcc 240
aggtcggcgg ggttgacacc ggcgggcatc gggatggacg acgacgcggt gctgacggcg 300
cctgtcgcga ctctgagctc gg 322

<210> 707
<211> 398
<212> DNA
<213> Mycobacterium bovis

<400> 707
ggatgtgctg tgagcgccgc accaccagcg ccgacgctaa ggatggaacg cacggcatct 60
tctgacgcgt aaccgcgttg tgatcgcgag ctgaggagac ggtatggggg agggttctcg 120
gaggccatct gggatgttga tgtctgtcga tcttgagccg gtgcaactcg tcggcccgga 180
cggtagcccg acggccgaac gccgctacca ccgtgacctt cctgaggaaa cgctgcgttg 240
gctctacgag atgatgggtg tcacccgcga gctggatacc gaattcgtca atctgcagcg 300
ccagggggaa gctggcggtt tacacgccct gtcgcgggca ggaagccgcg caggtgggtg 360
cggcggttg cctacgcaaa accgactggt tgttcccc 398

<210> 708
<211> 175
<212> DNA
<213> Mycobacterium bovis

<400> 708
atcacgacaa cagcgacggt gtgtcggatc agcggccccc gttgccgggc aatgttgagg 60
cgtttctgcy tctgggttag gccggctggg acnccgaggt ggctcgtcgg ccacatgggc 120
agcacaccac cgtggtgatg catctagacg tgcaggaccg tgccgctggc ctgca 175

<210> 709
<211> 210
<212> DNA
<213> Mycobacterium bovis

<400> 709
gcggctacgt gccatcgaga cactggcgca ggctatcgca cccgttatcg gctgcgagca 60


```

aatcgcggtg tgcgttcttg agcatgagtc ggcgaccgtc gtcattggtc acacccacga 120
cggaaagacg cagatcgccg tcaagcatgt gtgcgcgga ttatcaggac tgacctcctg 180
gctgaccggc atgtttggtc gcgatgcctg 210

```

```

<210> 710
<211> 312
<212> DNA
<213> Mycobacterium bovis

```

```

<400> 710
tacaagcggc acctcgccgg tgaactgacc gttcgcacgc tgcgcaccgc cgccggggcgc 60
gtgctcggcg cgccggcgcc ccccgaggcc tgagagggga accaaccatg caggtgaaca 120
tgacggtaaa cggcgagccc gtcaccgccc aggtcgaacc ccgatgctg ctggtccatt 180
ttctccgtga tcagctgcgg ctcaccggaa ctactgggg ctgtgatacc agcaactgcg 240
ggacatgcgt ggtggaggtc gacggcgtgc cggtgaaatc ctgcacgatg ctgcccgta 300
tgccctccgg gc 312

```

```

<210> 711
<211> 255
<212> DNA
<213> Mycobacterium bovis

```

```

<400> 711
agcggctggt tacgactccc tgtttgtgat ggaccacttc taccaactgc ccatgttggg 60
gacgcccgnc cntccgatgc tggaagccta cactgccctt ggtgcgctgg ccnncgcgac 120
cgagcggctg caactgggcg cnttggtgac cngcaatacc taccgcaccc cnacctgct 180
ggncaaanat catcaccacg ctcgacttgg tttagcgccg tcgancgatc ctcggcattg 240
gaaccggttg gtttn 255

```

```

<210> 712
<211> 304
<212> DNA
<213> Mycobacterium bovis

```

```

<400> 712
acgcgcgccg atcatatctg ctatggatgt acaattcagc tcttgctgtt ataccagtat 60
atggtgtact atttgatcta tgctgacgtg tgagatgcgg gaatcggcc tggtcgcact 120
cggccgggct ctggctgatc cgacgcgggt ccggttctg gtggcggtgc tggatggcgt 180
ttgctatccc ggccagctag ctgcgcacct cgggttgacc cgatcgaatg tgtccaacca 240
tctgtcgtgt ttgcggggct gcgggctggt antcccaacc tatgagggcc ggcaggttcg 300
gtat 304

```

```

<210> 713
<211> 352
<212> DNA
<213> Mycobacterium bovis

```

```

<400> 713
ccgcgctgct gctgacgtcg gtcgaacgtg cgacacgtct gcgaataccg gccgaacgct 60
gggtttatcc acaggctggc accgacgcc accgacaccc ggccgtcgcc gaccgccacc 120
gactgcacgc gtcgacggcc attcggatcg ccggtgcccg ggccgtggaa ctggctgggc 180
tggggctcga tgacatcgaa tacgtcgacc tgtattcgtg ctttccctcc gctgtccaag 240
tcgccgcaat cgaactcggc ctggacaccg acgatcctgc ccgcccgctg accgtcaccg 300

```

ggggcctgac cttcgccggc gggccgtgga gcaattacgt cacgcactcc at 352

<210> 714
<211> 233
<212> DNA
<213> Mycobacterium bovis

<400> 714
caggcgtgca atgacctgca ctgcgccgga nantccctaa cccactaaac cggggccgct 60
cacaagccgt gcagctcggg cagcgtcagg tgcgcgacca ggaantaaat gagcagacct 120
gtgccgtcaa cgatggtggc gatcatcggc cccgaaacga tggccgggtc natgcgcaac 180
ttcttcagca gcggcggaag gacggcanc accagcgach accacaccac gat 233

<210> 715
<211> 336
<212> DNA
<213> Mycobacterium bovis

<400> 715
gcgaanact tegtcaactt ccagggctgc ccgcaccaag tatttcgacg agtatttccg 60
tcgggcccgc gccgccggcg cgcggcagg ggtcatcctg gcggcggggc tggactcgcg 120
cgcgtaccgg ctgccttggc ccgacgggac cacggttttt gagctggacc gcccgcagg 180
ccttgatttc aagcgcgagg tgctcgccag ccacgggtgcc caaccgcgcg cctgcgcgcg 240
cgagatcgcc gtcgacctgc gtgacgattg gccacaagcc ttgcggggaca gtgggtttcga 300
tgcggtctga ccgtcggcac ggattgccga agggct 336

<210> 716
<211> 273
<212> DNA
<213> Mycobacterium bovis

<400> 716
ttgggcnttg ccncaatan ggcccgaatc aaaagccgag cagggtggaac ctancgcatt 60
cgcctctcgc tntgtgcacc cgagccatcg cagcgcggcg aattcccga tntcnccgta 120
ttctccggcg gccgggctaa cccatccan gccgaacggg tggtctntgc cgtgggtccc 180
gtgttgcccg atcggggcgt caccgggggt gctcgggtgc ggntgacat ggcnaactgc 240
ccnatgggc cgaccctggg gcagataaac ctg 273

<210> 717
<211> 327
<212> DNA
<213> Mycobacterium bovis

<400> 717
tggtggaggc cccaccaan acccgccgt aactctgtc acggaaatgc ggncaggccg 60
cgcgtagcac gtggtatccg ccataaagg gcaccttaag cacggcgctc caattctcga 120
acgacatctt gtggaagggt ccgtcgcgca agatcccggc gttgctcacc acaccgtgca 180
cggcgcgcaa ttcgtcaagc gcggtcttga tgatgttcgc tgcgcgctcc tcggtggcga 240
cgctgtcggg anttgccgac cgcccggccc cccttgctgc gaaatctcgg cgacgacctc 300
atcgccatc gccgaaccgg gcgccc 327

<210> 718

<211> 344
<212> DNA
<213> Mycobacterium bovis

<400> 718
gccggccaaa ctggccggcg gggttgctgt cntcaaggtg ggttccgcca ccaanaccnc 60
actcaaggat cgcaaggaaa gcntcaagga tgcggtcgcg gccgccaagg ccgcggtcaa 120
ggagggcatc gtccctggtg ggggancctc cctcatccac caggcccgcg aggcgctgac 180
cgaactgcnt gcgtcnnga ccggtgacaa ngtcctcggg gtccacgtgt nctccgaagc 240
ccttgccgct ccgttgttct ggatcnccnc caacnctggc ttggacggct cngtggtggt 300
caacaaggtc agcgagctac ccgccgggca tgggctgaac gtga 344

<210> 719
<211> 271
<212> DNA
<213> Mycobacterium bovis

<400> 719
cgaacctnaa ttgtcctgta atgcccagct caccaangca tggctggtgg ccggggcggt 60
gaagccggcg tctgcggcac cgtccaactc natgtggatn gccggaatgg ggatgtccgg 120
nacggcgaat ccgtanttcg cttgtcccggt gaggcccagg tggatggggg gaaggatcnt 180
ggtgtccggg atgatnatgg ggccgatgcc gccggttgaa gtccactgga tcgggaattc 240
gggaatcgtg atnccgacgt tcaggccgaa c 271

<210> 720
<211> 302
<212> DNA
<213> Mycobacterium bovis

<400> 720
ctaacggaat gaaagccctg gtggccgtnr cggcggtggc cgtcgtcgca ctgctcggtg 60
tatcttccgc ccaagctgat cccgaggcgg atcccggcgc aggtgaggcc aactatggtg 120
gccccccaag ttccccacgt cttgtcgatc acaccgaatg ggcgcantgg ggaattctgc 180
ccagcctccg ggtctaccg tcccaagttg ggcgtacanc ctcccgcgc ctcgggatgg 240
ccgctgccga cccggcctgg gccnaggttc tcgcgctgtc accggaagcc gacactgccg 300
gc 302

<210> 721
<211> 303
<212> DNA
<213> Mycobacterium bovis

<400> 721
ccgcgggaca cncctcnatg ctgccgccat ggacgcggtc gaacgcaagc agctgatcga 60
gctacaacgc cgcgcggaac gtttccgcgc cgggcgtgac cgcattccgt tgaccgggcg 120
gatcgcggtg atcgtcgatg acggcatcgc caccggagcg acggccaagg ccgcggtgcca 180
ggtcgcccgg gcgcacggtg cggacaaggt ggtgctggcg gtcccgatcg gccanacga 240
catcgtggcg aagattcgcc gggtagcgcg atgatgtggt gtgtttggcg acgccggcgt 300
tgt 303

<210> 722
<211> 280
<212> DNA

<213> Mycobacterium bovis

<400> 722

```
ctctgggacc ggccacggtg ccnccggcgt tcccggacgt gctgcgccag gtgtccggcg 60
gccgcgtgca tgggtgttccc ggatcggccg ctggccagag cccaccggtg aatctggcgc 120
ctggccgacc accgtgcgcc gtaggcttgc gatcgtgcag cgctggcggtg gccaggacga 180
gatcccgacg gattggggca gatgcgtgct caccatcggg gtatttgacg gcgtgcaccg 240
cgggcacgcc gaactgatcg cgcacgcggt caaaggcggc 280
```

<210> 723

<211> 333

<212> DNA

<213> Mycobacterium bovis

<400> 723

```
aataactcaag ctttcgtcag ttcattgcgc cagcagacca acaanagcat cgggacatac 60
ggantcaact acccggccaa cgggtgatttc ttggccgcgc ctgacggcgc gaacgacgcc 120
agcgaccacn ttcagcaa atggccancgcg tgccgggcca cgaggttggg gctcggcggc 180
tactcccagg gtgcggcgct gatcnacatc ntcaccgcgc caccactgcc cggcctcggg 240
ttcacgcagc cgttgccgcc cgcagcggac natcacatcg ccgcgatcgc cctgttcggg 300
aatccctcng gccgcgctgg cgggctgatt aac 333
```

<210> 724

<211> 320

<212> DNA

<213> Mycobacterium bovis

<400> 724

```
tgccgcggat ttggctggct gcccaatatt cagaatcggg cttttctttt tgccgcgacaa 60
taaggtcaca gtaaaccctc gttttgtgag atgcggggcg ggccggggcg antcgacctc 120
gagtgaatgg atctcgagtg aatggacagg gcatcgccct cgagtcgcat ccccatccaa 180
cagaccggtg ctcttgcatc ggaccctgaa ggtcccgcac ggaggggtgtg gttgccggcg 240
cggggtcacg gtgcggtagc gacgtagtgt ttgaacgaat ttcttgatgc tccaacctgt 300
ttgggtgttca atccagttct 320
```

<210> 725

<211> 296

<212> DNA

<213> Mycobacterium bovis

<400> 725

```
aancttgccg gctcggcccg gtcnagcatc cagctgctcg gcaaggaggc cagctaencl 60
tcgctgcgta tgcccagcgg tgagatccgc cgggtcnacg tccgctgccg cgcgaccgtc 120
ggcgaagtgg gcaatgccga gcaggcaa acatcaactggg gcaaggcccg tcggatgcgg 180
tggaagggca agcgcgccgc ggtccggggc gtggtgatna acccggtcna ccaccgcac 240
ggcgggtggtg agggtaaaac ctccggcgcc cgtcaccggg ttagcccggtg gggcaa 296
```

<210> 726

<211> 304

<212> DNA

<213> Mycobacterium bovis

<400> 726

antcgaaagt	gaccatctct	accttgagtg	ccataccgcc	cgaccctatg	cctcggatag	60
ctcggcgga	agaaacgctt	gcagtgccgc	cgaataggcg	gctacgtcgt	gagcgcccat	120
caactctcgc	gcggagtgca	tcgccagctg	ggcggcgccg	acgtcgaccg	tggggattcc	180
ggtgcgcgcc	gcggccaacg	gcccgatcgt	cgaccgcac	ggcagatcgg	cgcgatgttc	240
gtaacgtgc	ataggcactc	ccgcgcgctg	gcaggccagt	gcgaacgccg	ccgcggtgcg	300
tccg						304